James Sturgis Pray,
Cambridge, Mass.

THE

NEW ENGLAND FARMER;

A MONTHLY JOURNAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THEIR KINDRED

ARTS AND SCIENCES;

AND ILLUSTRATED WITH NUMEROUS BEAUTIFUL ENGRAVINGS.

"What may not enlightened citizens accomplish, who have discarded the false, bustling pleasures of towns, and, carrying into the country the knowledge they may have acquired, apply to Agriculture the rich and varied assistance of the physical sciences?"—FOURCROY.

SIMON BROWN, EDITOR.

FREDERICK HOLBROOK AND HENRY F. FRENCH, ASSOCIATE EDITORS.

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INDEX TO THE TENTH VOLUME.

ILLUSTRATIONS.

POETRY.

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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

JANUARY.

Hear the sledges with the bells—
Silver bells!
What a world of merriment their melody foretells!
How they tinkle, tinkle, tinkle,
In the icy air of night!
While the stars that oversprinkle
All the heavens seem to twinkle
With a crystalline delight;
Keeping time, time, time,
In a sort of Runic rhyme,
To the tintinabulation that so musically wells
From the bells, bells, bells,
Bells, bells, bells—
From the jingling and the tinkling of the bells."

EDGAR A. POE.

JUDGE by this what a wonderful talent had poor POE, of so mingling sound with sentiment as to awaken a common chord in the bosom of almost any reader. Who could read the above lines with a July sun pouring down upon him, without thinking of January, and the "world of merriment" that accompanies its advent—and here we are listening to those same "silver bells," with their "tinkle, tinkle, tinkle," as the joyous riders go skimming over the frosty road, to dance, perhaps, "the old year out and the new year in!"

That good old custom of "merrie England," by which the meeting of the extremities of the two years seemed to complete a magnetic circle, and to cause, like the approach to each other of the poles of the natural magnet, a wonderful sparkling, so that, from Christmas to well into the New Year, "all went merry as a marriage bell," has come legitimately down to us, and is, in our opinion, far *less* "honored in the breach than in the observance." Let any one read with dry eyes or without many a merry laugh, our own IRVING'S sketch of Christmas, and we will unceremoniously pronounce him an unfeeling churl—but we do not believe there is a single reader of the *New England Farmer* who comes within our category, and every one of them, we doubt not, will agree with that elegant writer, when he says: "Amidst the general call to happiness, the bustle of the spirits and stir of the affections, which prevail at this period, what bosom can remain insensible? It is, indeed, the season of regenerated feeling—the season for kindling, not merely the fire of hospitality in the hall, but the genial flame of charity in the heart.

"The scene of early love again rises green to memory beyond the sterile waste of years; and the idea of home, fraught with the fragrance of home-dwelling joys, reanimates the drooping spirit, as the Arabian breeze will sometimes waft the freshness of the distant fields to the weary pilgrim of the desert."

Dear reader, does not that touch a tender spot in your own bosom? You cannot have travelled the highway of human existence many years without having passed scenes that you love to have, at least as often as once every year, rise "green to memory," and in which you can again revel with a reality almost sufficient to forget that they are not of the present.

Then keep up the good old custom of building a bridge, of the rainbow hues of pleasure, which shall span the imaginary ravine which divides the merry Christmas of the days of old, from the merry New Year of these times in which we live.

Who shall paint the joys inside the thrifty farmer's house on the first day of the new year? No one forgets that day; ere the sun is up, the prattler from his tiny crib lisps out: "With you a happy new year, father"—"With you a happy

new year, mother." Bless those innocent lips, both father and mother, for they at least are sincere in their wish; but not the prattler alone—from the bosoms of the hale and hearty boys and the beautiful, rosy-cheeked girls, as they first meet their loved parents on that new morn, the words rise up almost spontaneously, as if they were the bursting of the deep-sown seeds of affection, and find utterance at the lips—"Father, mother, I wish you a happy new year;" and in that family you may be sure there is a love that shall never know decay—a love so pure and holy, that when the last account shall be rendered up, it shall be found on the credit side, and of not less weight in the scale of eternal justice than piety itself.

The farmer enjoys that day. He blesses all his household; he looks about his premises and sees whether every thing is snug and right; he looks into his books, squares up his accounts, and prepares to start anew into the year that has just opened. God prosper him!

But we have to do not only with the first day of the year, but with the first month of the year; cold, blustering, persevering, happy, welcome January! The healthiest month, probably, of all the year. It is, more emphatically than any other, the farmer's jubilee. Up to late in December he has been busily engaged in the "fall work;" now it is all done. The harvest has been gathered in,—the garners and the cellars are full,—seed-time and harvest have not failed, and man and beast are amply provided for. It is the time for study, for reflection, for consultation with friends, for joyous evening assemblages, for singing in full chorus to the good old tune, "Winter"—

> "His hoary frost, his fleecy snow,
> Descend and clothe the ground;
> The liquid streams forbear to flow,
> In icy fetters bound."

It is the time "to clothe the naked, to feed the hungry, and to bind up the wounds of the broken-hearted." It is the time to be happy yourself and make all happy about you!

But while the thrifty farmer and his happy family are enjoying the warm fireside and the luxuries of the cellar inside the house, are those dumb helpers outside, without whose aid the farmer could do but little, cared for? That they are! A good farmer would sooner suffer himself, than have his cattle suffer.

We will just step into the barn, with our friend, the farmer, and see for ourselves how matters are. Well, there stands "Jim," a large, well-proportioned bay, sixteen hands high, weighing well on to 1300 pounds, eyes as bright as a new dollar, legs clean and smooth, body well blanketed, in his clean wide stall, and as his master approaches, if ever a horse laughed he does! He knows who his master is as well as we do. Our friend walks into the stall, pats "Jim" on his proudly arched and glossy neck, and see how affectionately that neck comes round, and the head of the horse rubs against the shoulder of the owner, as much as to say,—"thank you, master, for taking such good care of me. I know what gratitude is." We pass on, pronouncing "Jim" a trump and nothing else.

A large row of heads present themselves loosely fastened between the stanchions, or more freely still, by chains or straps, and as we approach they rise, and two clear round eyes from each look wistfully at us, and sure enough, there we think we see old "Swan," the upper ox of the entire ranks, give a squint down the line of heads, as much as to say, "right, dress!" and wink one eye, indicating to the others, "there's our master, receive him with proper respect, for no cattle in this world have a better."

We always did believe most faithfully in Scripture, but do not think we ever had a passage so tellingly brought to our recollection, as old "Swan's" look brought this: "The ox knoweth his owner and the ass his master's crib."

How slick and smooth and nice they all look, and so happy and contented. And even that old fellow over there, separate and apart from all the rest, with a ring in his nose, does not appear half so much like those "bulls of Bashan," that compasseth the unhappy Psalmist, "as a raving and a roaring lion," as we have seen bulls. Indeed, he seemed to be in quite an affectionate and agreeable mood.

Our farmer's cattle are indeed well cared for, and as happy, apparently, as cattle ought to be.

January is the great starting point of the year; like the diurnal meridian to the mariner, it is the annual meridian to the farmer, when he works up his reckoning, and whence he takes a new departure.

May this present January be such a starting point to every reader of the *Farmer*, that he may look back upon it with the same pleasure that one looks to the commencement of a prosperous voyage, when the destined port has been reached.

May sunny skies and fertile showers and gentle gales surround him, and clustering affections and all the sweet sympathies of life crown his circles with domestic bliss.

GRINDING FEED.

Experimental farmers have long urged the importance, and even necessity, of chopping or grinding hay, as well as other feed, for cattle and horses. The lazy drones have had a hearty laugh over the idea, and called it "Book Farming."

Now the theory of chopping, and grinding food, is based on a principle which lies at the foundation of animal physiology. Rest is essential to the accumulation of muscle, as well as fat. If we wish to increase an animal in flesh, or fat, we do not work him.

Now a cow wants one-thirtieth of her own weight in hay a day, to keep her in good order; and we may thus calculate the amount of labor required to masticate the food, and fit it for the stomach. The labor of chopping, or grinding twenty-five pounds of dry hay a day, is no small item. This excessive labor is performed by one set of muscles—the jaws; but, by sympathy, affects all the other muscles; causes the blood to circulate quicker; the breath faster, the consumption of food greater; and still the growth of the animal is retarded.

If a machine was invented to grind hay, the ground article would approximate, in value, to unground oats, in producing fat and muscle. Chopping hay and stalks is valuable just in proportion as it approximates to grinding, and relieves the animal of the labor of grinding it. An animal fed on ground, or minced food, may perform an amount of labor equal to grinding it fit for digestion, and fat as fast as another which does not labor, but grinds its own food.

Prematurely grey whiskers and beard, while the hair is still black, show the relative amount of labor performed by the jaws and the head.—*Ohio Farmer.*

NEW BOOKS.

VILLAS AND COTTAGES. A Series of Designs prepared for execution in the United States. By CALVERT VAUX, Architect. Illustrated by 300 Engravings. Harper & Brothers, New York, 318 pp.

Mr. Vaux was a partner in business of the late lamented Mr. Downing, and probably furnished to Mr. D.'s works the greater part of whatever related to architecture; between them there was a happy combination of that varied talent and skill necessary in such works to give them value and currency, and they have, therefore, met the wants of our people in a considerable degree, and have done much towards forming a more correct taste in the designs and finish of our dwellings.

The designs struck out in the work before us are not the mere results of the imagination, but have a "local habitation and a name," and shelter and afford convenience and comfort to men and women of taste and refinement. They possess the merit of having been tested, and by use are found to answer the purposes expected of them when constructed. No encomium, therefore, upon the designs is necessary; they have been tried and are not found wanting in any essential points. The book itself does credit to artist, printer and publisher; the paper is thick, fine and white, the type large and new, and the engravings finely cut and clear.

There are designs given for nearly all classes of dwellings from the cheap log-house to the mansion costing from $10,000 to $15,000, and as they are within a reasonable day's ride from Boston, by rail, any person may make personal examination of such a house as he may particularly fancy. Few persons can afford to build without first consulting some such work as this, We therefore commend the work on "Villas and Cottages" to all who can afford it, whether they contemplate building or not. We take pleasure in making the following extract:

"Architecture is entirely the invention of man, and, as it expresses his needs and his nature, it must necessarily be regulated by the laws to which he is subject. At the same time, it is equally clear, that it can have no independent laws of its own, simply because it has no independent existence. As it seeks to please the eye, its form and colors should be carefully designed in accordance with the laws of the eye, or it will be a failure, as far as this organ is concerned. As it addresses itself to the intellect, it ought to be orderly and without any appearance of accident in its conception, or it will appear unintellectual.

As it appeals to the heart, it requires to be forcibly and artistically true in its expression, or it will remain a lifeless collection of building materials; and as it ministers to the soul, it must be beautiful and pure in its intention, or it will be ugly and baneful in its influence. It is always the mirror of its age, accurately reflecting the customs, morals and science that prevail in every nation at a given period; and as these have been dissimilar at different times and places, architecture has naturally crystalized in various parts of the world into what we call separate styles."

For the New England Farmer.

COMMITTEES.

Too little care is taken in selecting persons for the examination of objects and the awarding of premiums at our Shows. They should be men of sound judgment, and practical experience, in the matters on which they are to judge. The neglect of this indispensable qualification often renders their awards the merest farce imaginable. The duty is one of high responsibility, and no honest man, void of the requisite qualifications will undertake to discharge it.

It is a rule, in some places, to name as chairman one who knows how to use the pen, who can put in readable and creditable form the decisions of his associates. To this there can be no valid objection. There are many who wear fine cloth, who can do a good service in this way, who can do but little in any other. When appointed, they should prepare themselves for the work assigned; when prepared, should be on hand to attend to it. It not unfrequently happens, on the morning of the Show, when a committee is called, no one appears, and the papers have to be passed into the hands of those hastily named, and superficially qualified. These remarks are made for the instruction of those who appoint, and those who are appointed; and if they shall chance to create any improvement in the discharge of the duties of either, the object of the writer will be fully attained.

Nov. 19, 1857.

For the New England Farmer.

MINERALOGY.

Mineralogy is intimately connected with geology, as it teaches the properties, composition and relations of mineral bodies, and the art of distinguishing and describing them. These two sciences, geology and mineralogy, are frequently taught and learned in the same connection, as in many particulars they tend mutually to illustrate and explain each other. In fact, it is believed by some authors, that the earth, or the solid part of it, was originally made one mass of solid rocks or minerals; that a bed for vegetation was produced by the decomposition of rocks; that this decomposition was effected by the expansion of water in the pores or fissures of rocks, by heat or congelation, by the solvent power of moisture, and by electricity, which is known to be a powerful agent of decomposition. Be this as it may, and it is not my purpose to entertain the subject at the present time, still it is a well known fact, that the decomposition of rocks tends to the renovation of soils, as well as their cultivation. But, that the solid or mineral parts of the earth were not all formed at one time, is evident from the fact, that no animal or vegetable remains are found in rocks of primitive formation.

Of all the memorials of the past history of our globe, the most interesting are those myriads of remains of organized bodies which are found in secondary rocks, and in alluvial formations.—These consist of numberless aquatic plants, zoophites, fishes, crocodiles, tortoises, serpents, birds, and cetaceous animals, all of a different species from any which now exist. More than thirty different species of animals have been found imbedded in the secondary strata; no living examples of which are now to be found in any quarter of the globe. Among the most remarkable of these, are the Mammoth, the Alegatherius, the Mastodon, the Tapir, &c. These were all larger than any living animals. Besides these, there have been found the remains of the elephant, the rhinoceros, the hippopotamus, the elk, &c., of different species from those which now exist, but belonging to the same genera. These fossil remains, whether they be regarded as belonging to the science of geology or mineralogy, are certainly among the most remarkable curiosities and wonders to be found in the cabinets and museums either of the old or new world.

Minerals have been variously classed by different authors. They are, perhaps, more commonly comprehended under the five following classes: earths, salts, inflammables, metals and petrifactions. Earths are generally applied to such substances as have neither taste nor smell, and are not inflammable. Salts are acids and alkalies, and the compounds formed by acids in union with alkalies, earths, and metallic oxides. Inflammables are mineral substances which may be easily ignited or set on fire. Metals are heavy, hard, opaque bodies, possessed of a remarkable lustre, insoluble in water, fusible by heat, and maleable in different degrees. Petrifactions are substances which have been turned to stone, and are incrusted within the cavities of organized bodies.

There are nine classes of *stony* minerals, of which all other rocks are composed, and which are therefore termed the *elements* of rocks. These are *quartz*, *felspar*, *mica*, *talc*, *hornblende*, *argillite*, *limestone*, *gypsum* and *chlorite*. These are sometimes found naturally crystalized with more or less regularity. They are also variously compounded, and usually classed according to the formation to which they respectively belong. Thus, from these *elements* we have *granite* and *gneiss*, both composed of quartz, felspar and mica, in different proportions, and according to their different peculiarities. So it is with regard to all other compound rocks.

Though no common farmer can be expected to arrive at a very perfect knowledge of all the minerals, simple and compound, included under the head of these nine different classes, yet by making a beginning with some one kind of mineral, *granite*, for instance, and improving all his leisure moments in collecting different specimens of granite, and of its constituent principles, quartz, felspar and mica, and comparing them with the description given in some good text-book, he will soon arrive at a respectable knowledge of his subject. More especially will this be the case, if he has some one, already acquainted with the subject, to accompany him, because the living description of the tongue will be better understood, than any description given in a book. Having thus obtained a competent knowledge of granite, and its component elements, quartz, felspar and mica, he is now prepared to take up and examine, in like manner, some other mineral; and thus, by improving the odds and ends of his time, "here a little and there a little," he will be able to arrive at important results.

But, in order to prosecute this study to advantage, the student should not only have a good text-book, but furnish himself with suitable apparatus for making his investigations. Thus equipped, he should direct his way into the fields of nature; and whatever mineral meets his eye, whether it be the pebble on the shore, the rock of the mountain, or the diamond in the valley, he should carefully examine it and investigate its properties; and, if it be thought worthy of preservation, he should carefully deposit it in his cabinet, in its proper place. Should he meet with more than his immediate wants require, he should preserve them for the purpose of exchanging them for those of remote places. But, above all, while he is studying into the properties, the uses, and the relations of minerals, let him remember, that they are the handiwork of the all-wise Creator, to whom he owes unbounded love and veneration.

JOHN GOLDSBURY.

ASPARAGUS BEDS.

Very many persons who possess gardens and have an abundance of room, deprive themselves of this delicacy because they think there is a great deal of trouble and mystery in raising it. There is scarcely a simpler crop produced in the garden. We have given over and over again the mode of setting out beds, and may refer to it again in our next issue, as it can be done any time before the closing up of the season by frost. Our purpose now is to give a hint as to the way of treating beds in autumn. It is this: When the stalks have turned yellow, mow them off close with a scythe, and burn on each bed its own crop, scattering the ashes evenly over it. Then

take a broad-pronged fork, which should be used in every garden, and fork over the bed, being careful not to injure the crown of the plants, and apply a top-dressing of rich, short stable manure. Let this remain until the frost is out of the ground in the spring, when the loose top should be raked off, and the remainder forked in. About the first of April sprinkle over each bed a dressing of cheap salt to the extent that no portion of the ground can be seen. This is all that will be required until the ensuing fall. A bed of asparagus, properly made in the first instance, and cared for in this way afterward, will last for twenty-five years.—*Germantown Telegraph.*

For the New England Farmer.

SWITZERLAND.

LETTER FROM MR. FRENCH.

From Heidelberg, which is in the Duchy of Baden, we took train for Baden-Baden, the place famous over all the world for its mineral springs and fashionable society, and infamous for its gambling saloons and dissipation. Beautiful and elegantly dressed ladies, in the evening, stood or sat in the magnificent public rooms of the "conversation-house," around the gaming tables, losing and winning hundreds of dollars at a single turn of the roulette. It was a sight to make one shudder to see the coolness with which they risked body and soul with their gold, to gratify this insane passion for games of chance. We drove to what is called the New Castle, which was formerly the seat of one of the secret tribunals, where all the terrors and tortures of the Inquisition were suffered by the poor victims of political or religious persecution. We descended into dungeons, closed by heavy stone doors, and into which the victims were let down by ropes from above, through trap doors, and saw the rings and racks and other instruments of torture, and the subterranean halls of judgment, where the prisoners were tried and sentenced. Then we visited what is called the Old Castle, some miles distant, a fine ruin of what was formerly a stronghold in war. It is in the midst of a heavy growth of wood, a part of the Black Forest, which extends, I think, from Heidelberg across, some forty miles. The hills around Baden are, in the grim poetic language of German taste, called the Children of the Black Forest. This forest is different from anything I have seen since I left New England. It is composed principally of oak, maple and hemlock, of very large size, and in the neighborhood of Baden the white pine is found, in its natural growth. No white pine grows in Great Britain, so far as I have observed, except small specimens planted in ornamental grounds, and those were so unlike our native growth that I could distinguish them only by careful examination of their leaves. For the information of our readers who may not have observed or studied such trifles, it may be suggested that our three most common species of pine may be always distinguished, however distorted by unnatural culture, by the number of leaves in a tassel or bunch, the white pine always growing in fives, the yellow or pitch pine in threes, and the Norway pine in twos. And, by the way, let me say that of all the evergreens I have yet seen, and I must now have seen them all, for beautiful effect in grouping, or in masses for grounds of wide extent, our common white pine, so common as to be almost despised, is in my opinion the most beautiful, and our hemlock, whether grown single or in clumps, is a far finer tree than any of the far-fetched furs or spruces. When I have leisure to write on this subject, I have some foreign trees to recommend which are uncommon if not unknown to New England. In the Black Forest of Baden the old hemlocks seemed to nod to me as an old friend, and the white pines, with their peculiar rustle in the wind and their balsamic fragrance, almost carried me back to old Exeter.

From Baden we went to Basle, and thence to Lucerne, all the way, about two hundred miles, by rail, except about one hour in a diligence, over a mountain, where the railway was not completed. All along this route we observed fine crops of tobacco and oats, with some poor dried up crops of Indian corn. Here again we saw large hills, smooth and free from stones, covered, thousands of acres, with the grape. Here, too, we saw the storks, wading sometimes in the rivers, sometimes walking about among the laborers in the fields, as tame as hens and chickens, sometimes resting, apparantly asleep, on one leg, on little islands in the stream. They are seen flying over the villages, resting on the house-tops, and they sometimes build on the top of an old chimney, being regarded by the people as almost a sacred bird. The labor along this route is performed by single oxen or cows in carts, harnessed sometimes in collars like horses, sometimes by the hams, and most frequently driven by women. The sugar beet is extensively grown here, also, as through most of the continent. Between Basle and Lucerne apple and pear trees loaded with fruit are abundant, and apricot and cherry trees are almost always in sight. The horse beans, such as are so extensively cultivated for animals in England, are growing here to some extent. Of the architecture of Switzerland, with its picturesque curved roof, sweeping so gracefully almost to the ground, and its other peculiar features, I will not attempt yet to speak fully, leaving the topic for separate consideration in the future.

For the first time since I left America, I found on the route to Lucerne, railway cars like those in use in the United States. Throughout England

and the continent, until now, the cars, which, by the way, are in England always called carriages, are constructed in sections, each with two seats facing each other, so that half the passengers ride backwards, and each carriage accommodating about ten persons. There are usually first, second and third class carriages, the first class stuffed and cushioned and comfortable, the second in England with bare boards for seats and backs, and stiff and hard enough they are, the third not divided off so carefully, and much like the second in point of comfort. The cost of travelling in the second class in England is somewhat greater than by our first class. Most decent people take the second class, very few occupying the first class, which I tried sometimes, but soon abandoned, finding very little society there, sometimes riding fifty miles entirely alone, which did not at all answer my design in going abroad. The second class cars in France, and generally on the continent, are cushioned and quite comfortable. On all these railways you show your ticket before the train leaves, and are then locked in, and cannot get out till the guard unlocks your door at the station. Probably accidents are prevented by this precaution, and fewer mistakes made than where each man looks out for himself, and takes the risk of jumping on and off at pleasure. I was glad to find our social, free and easy style of cars here in Switzerland, for away from home our own customs and habits have a wonderful charm for us wanderers.

We reached Lucerne at about eight P. M., and it being a brilliant moonlight night, immediately took a boat, and were rowed across the lake to a bath-house on its shore, and enjoyed the luxury of a bathing in the clear waters, a familiarity we had also indulged in with the waters of the Rhine at Coblentz. The morning brought us a realizing proof that we were indeed in Switzerland, and among her mountains, for the first glance of sunrise brought us a clear view of the snow-capped mountains in the distance, overtopping the hills which surround the beautiful lake Lucerne. Embarking on the little steamer, close by our hotel, we made the tour of the lake. This is the land of William Tell, and on the lake shore we saw his chapel, erected at the spot where it is said he leaped ashore in a storm, from the boat where he was carried as a prisoner. A storm had arisen, and fear of shipwreck had induced his keepers to unbind him to assist in managing the boat. Taking the helm, he run the bark close to the point of rock which here projects into the lake, and as they shot by in the tempest, he leaped upon the rock, leaving his captors to their fate.

The scenery on lake Lucerne is said to be the most beautiful in all Switzerland. The abrupt mountains stand up, like walls along the shores, hemming in the water to the form of a river, and then suddenly falling away, through a green valley, the eye wanders over fields of grain and verdure, till it catches over the nearer hills, glimpses of the glaciers, shining in the sunlight, and again the tall peak of the Jungfrau away in the distance, white with his eternal snows.

At a small village on the shore of the lake, in the afternoon, we left the boat, to ascend Mount Rhigi. Taking horses and guides, we mounted and followed a narrow precipitous path about nine miles, slowly winding our devious way up—up, till behind us the mountain peaks on the opposite side of the lake rose up in scores, white as the unsullied snows could paint them, and brilliant with the rainbow tints of the setting sun. We found at the top a large hotel, with accommodations for two hundred persons, and crowded before night with visitors, who had come like ourselves, to behold the setting and the rising of the sun.

A storm of rain, with thunder and lightning, burst upon us, just as we arrived, which to those unaccustomed to thunder showers seemed very grand and awful, but to those of us who had spent summers in New England, it brought nothing new of fear or grandeur. At the dawning of the next day, the sound of a horn brought out the two hundred pilgrims, in a chilly, bleak morning, to witness the sunrise. A more disconsolate looking set of beings never met to worship the god of day. Few had brought up from the valley where summer heat was raging, either overcoat or shawl, and now the morning was like chill November. Some had borrowed a blanket from their beds, others were apparelled in straw hats and thick overcoats; all were walking to and fro, wishing the job were over, so that they could retreat to the house. Finally, the sun deigned to show his head, and as his beams were caught by the distant peaks for a few moments, we began to grow enthusiastic, and to forget the wintry chill, when an envious cloud dropped like a curtain across the east, and with one accord, we turned our faces towards the hotel, forgetting our disappointment in the anticipation of a warm room and hot coffee.

After breakfast, we undertook the descent, our party on foot. The day was tolerably clear, so that we had fine views of the level country of nearly all Switzerland, spread out in one broad expanse below us. We could see herds of cows grazing so far below that they seemed no larger than grasshoppers, yet the tinkle of the bells which each wore on her neck, came up distinctly through the clear air. We met droves of cows feeding on the mountains, a fine, large breed, resembling in shape and color those which Mr. Webster and others imported as Hungarian cattle. I do not know, by the way, that I have mentioned the goats kept

for milk in this country. At various points we have met them, driven up at night like cows to be milked, and giving indications that they carried with them a good supply of milk. Our descent from the mountain furnished much amusement, partly at my own expense, for when I had walked some five miles down the almost perpendicular side, I had such warnings of the frailty of human means of locomotion, that I was glad to avail myself of one of the peculiar institutions of the country and take a chair for the remainder of the journey. A chair is a vehicle in the form of a large arm-chair, with two handles before and behind, by which it is carried by two or more men, precisely as farmers pole out hay from a swamp.

A large French gentleman and his lady were carried all the way down in this manner, the man having five bearers, who changed hands, and the lady, who was of smaller dimensions, two. The bearers prefer to have you sit with your face uphill, and ride backwards. Thus in solemn procession we proceeded down the hill, at a pace to outstrip the mules, and on the whole, as it costs no more to be carried thus than to ride a mule, I would recommend to all who try the mountains to make one experiment of this mode of progression. My companions, to my surprise, made very little fun of my ride, which I had supposed would amuse them for a week, but next morning I was uncharitable enough to suggest, when I found one of them confined to his bed by sore limbs, and another with the skin so worn from his toes that he could not walk, that they were as badly used up as I was, and did not dare to laugh at me.

This was our first attempt at much of a walk, and on the whole, was not a very prudent beginning.

But this is as much of Switzerland as you can find room for in the paper, so farewell.

Yours, &c., H. F. FRENCH.

DO BIRDS UNDERSTAND WHAT THEY LEARN?

And now comes the question whether birds do not, in some degree at least, understand what they learn. It cannot be denied that, in a state of nature, their notes and intonations are significant to each other, and convey intelligence on which they act; nor does it require much observation or credulity to lead one to the conclusion that they are not altogether ignorant of the meaning of the words which they are taught. They appl, them, at least, very often, very opportunely. We know of a parrot that was very fond of a bone—not a good thing to give a parrot by the way—and when the bird had picked it, he would whistle to and call by name, the spaniel that was suffered to run about the house. When the dog came, as he always did when within hearing, the parrot would drop the bone out of his cage; and the dog very complacently picked it up and proceeded then and there to feed upon it, the parrot looking down on him and calling him "Pretty Beau," ever and anon during the operation. When dinner was brought, the parrot would climb up the bar of its cage, and there remain, crying, "Bring Polly's sop," till something was given to it. If a bottle of ale or wine were brought in, it would say, "Waiter! Waiter! a bottle of wine and a cigar." This parrot, which was an excellent talker, had not been taught to call the dog, but he had been in the habit of hearing him called to receive bones and bits, and did likewise.—*Frazer's Magazine.*

For the New England Farmer.

ECONOMY IN BEE CULTURE.

I was pleased to notice an article in the *New England Farmer*, monthly, for June, entitled "Cheap Bee Hives," coming from the pen of one so justly celebrated as a successful apiarian. It will, I am confident, have a salutary influence upon many. The numerous attempts that have been made, and the large amount of money that has been spent to improve the dwelling of the honey bee, and which have proved futile, have caused many to think that bee culture, is a branch of rural economy that "wont pay." Others have gone back to the old box hive and brimstone, as the only sure way of getting a portion of the honey gathered by their bees. I want a cheap bee-hive—one that will give the bees ample room, and every facility for storing their food for the many months they are unable to gather from the fields, and to rear their young; one in which they will deposit for my own use the surplus they may gather, and in a style that will look the neatest when placed upon the table, or that will find a ready sale when offered in market.

The honey harvest with us is usually of but short duration, and whatever the bees do they must do quickly. If a swarm of bees are put into a hive that is lined upon the sides and top with loose particles of wood or dirt, that might prevent the bees from fastening their comb firmly, they are, from necessity, detained from their proper vocation of honey-gathering and comb-building, until they can remove it from the hive.

When the honey is plenty in the field, a large colony of bees will store it very rapidly. For instance, in June, 1856, a swarm of bees was put into an empty hive containing 1965 cubic inches, which within thirteen days from the time they were hived, was filled with brood and store comb; also two boxes, each containing 12 pounds of honey. The hive was of a very simple model, planed smooth and clean inside. Planing the inside of a hive is but the work of a few moments for a mechanic, and much less time than it would take a large swarm of bees to clear from the hive the loose particles of wood that always adhere to sawed lumber, besides the dirt and dust that usually finds a resting-place upon lumber while it is seasoning. I think the swarm of which I have made mention stored more honey than they would have done in an unplaned hive. In that particular I must differ from Mr. Quimby, thinking it true economy to plane the inside of a bee-hive, and charge the necessary expense to the bees. AMICUS.

MOUNTAIN SEEDLING GOOSEBERRY.

This is a new variety, which originated in New Lebanon, N. Y. Fruit of medium size, roundish-oval, red; flesh fine, tender, and when fully ripe, sweet, and fully equal to the best. Skin not as thick as many of the English sorts. Great grower and bearer; fruit on long stems, on drooping branches; few thorns; fruit very easily gathered. Perfectly hardy in bush and fruit, as it never mildews. One of the very best, if not the best, for general cultivation, as it is free from all the objections brought against the English sorts in regard to mildew, while it is much larger than the Houghton's seedling, a well known and fine American sort.

STRAWBERRY BEDS.

It is a common objection with amateur cultivators of the strawberry, that their beds constantly require replanting. Also that they are greatly troubled with the weeds during the bearing period. To such, and to all others not acquainted with the cultivation of this most desirable fruit, we would say, that if they will as soon this month as convenient give their beds a good dressing of short, well-rotted stable-manure, broken up finely—as solid lumps may press too heavily upon the plants—previously applying a tolerable sprinkling of wood ashes, if at hand—the plants will be preserved in fine, vigorous health, and will take a very early start when the season opens again. In the spring, very little of the manure, if any, need be removed—the plants will strike through the covering energetically, *and the top-dressing will act as a mulching, preserve the ground in a properly humid state, and prevent the growth of weeds.* We follow this plan with entire success.

It is folly to complain of a want of success in the production of any fruits, if the necessary and obvious means are not adopted to entitle us to success. Those who are unwilling to give a little time, labor and expense to their proper cultivation, had better abandon it altogether.—*Germantown Telegraph.*

THE SUGAR CANE.—It is probable that *new plants* will be gradually brought to the notice of the cultivator of the soil as long as he finds it necessary to resort to it, for a subsistence, and others, not considered so good, will gradually give place to them. The Chinese sugar cane may take high rank, and long be considered one among the good ones; at any rate, we do not yet know enough about it. We are, therefore, happy to notice that Mr. J. F. C. HYDE, of Newton Centre, proposes to lecture upon it during the coming winter, for a moderate compensation, before such associations as may favor him with a call Mr. H. has incurred considerable expense in cultivating the cane, expressing its juice and manufacturing it into syrup, and in making paper from the waste stem.

A ROUSING CROP.—It is estimated that Illinois this season will produce two hundred and eighty millions bushels of grain—more than ten bushels for every man, woman and child in the United States. This will knock the speculators into the middle of next year.—*Ohio Valley Farmer.*

MANURING ON THE SURFACE.

Surface manuring is no new idea; yet if our memory serves us, the practice is almost universally ignored by agricultural writers of the present day, as a method of manuring. It is acknowledged as a very good thing to preserve favorite plants or newly set out trees from the effect of drought, but very little beyond this. "Those who imagine," says the editor of the *Working Farmer*, "they find good results from spreading of manure on the surface, and leaving it for days, weeks or months before it is plowed under, mistake the action of the litter or longer portions of the manure as a mulch, for the action of the manure on the soil." We so far differ from this and kindred opinions on the subject, that we think manuring on the surface, for ninety-nine farmers in a hundred the best general method of application.—We except all cases where the drill application of compost is found desirable, and garden and lot culture. Nor do we maintain that there is not a more perfect method of preserving and preparing all the elements of the manure heap, by its careful husbandry under sheds, an occasional treatment with diluted sulphuric acid, or some other "fixer," a cistern to catch the drainings, and a pump to pump them back upon the heap, and patience and perseverance and constant watchfulness. A more perfect method still is that of Mr. Mechi, who applies his manure only in a liquid state, and for this purpose has his farm traversed with iron pipes, to convey the fluid to the different fields. He says it pays in England, and it may be so, though his neighbors doubt it very much. But on a Virginia farm, we think sensible men would account the Sheriff of London stark mad. We maintain that this mode of manuring (viz.: on the surface) is in itself so little inferior to the most perfect methods, that taking into consideration the circumstances of our farming population, the extent of surface and high price of labor, the attention, and time and management that the mass of farmers can give to this branch of their operations, it is for them the most economical and the best. *It will pay better.*

We ask now the reader's attention to the ammonia theory. That *ammonia* is the element of greatest value in stable manures, we do not question. That it is very volatile, flies off and escapes by exposure to the atmosphere, everybody knows. Upon these principles is based the recommendation to plow under immediately, manures which yield ammonia, that the earth may absorb and preserve it. Now let it be distinctly borne in mind, that *fresh* manure of any sort does not contain this volatile ammonia, but only *nitrogen*, which is not volatile, out of which the ammonia is formed; and that ammonia is generated only as the nitrogen putrefies in the rotting manures. If the manure accumulates in the stable, the warmth and moisture of the daily additions soon bring on active fermentation, and the pungent ammonia which assails us, is the result of the putrefaction thus caused. Until this process of rotting commences, ammonia is not formed, and the manure not liable to waste, and it ceases to be generated when the rotting is checked. Now when we are ready to remove our manure heaps in the spring, we find them usually rotting to some extent. Let us follow, and observe the whole process It is taken up first, forkful by forkful, and pitched into the cart, the ammonia, of course all the time seeking its freedom; it is hauled, reeking and smoking, a long distance perhaps, to the field; now it is dropped into small heaps, where it remains a week or so, until you are ready to plow the land. If you are ready, or when you are ready, these heaps are carefully spread out on the ground, the more perfectly the better, and then plowed under, not immediately, even under the most careful management, but as soon as it can be done—with a delay, ordinarily, of an average of some hours. Now, with all this necessary opening and forking, and tossing and spreading, our impression is, that the free ammonia is very much like the Frenchman's flea, which, when he put his finger upon it, wasn't there; the point of time when we are ready to lay hold of it, is just when we may as well save ourselves the trouble: it is not there. But let it be borne in mind, that the ammonia we have been dealing with, is that only which was generated in the rotting heap, before its removal. When the heap was opened to the air, the process of rotting ceased, and ammonia was no longer formed. Supposing, then, this free ammonia is pretty well gone, at any rate, we have the remainder of the manure, with its unchanged nitrogen, (not ammonia) to deal with. Plow this under to the depth of eight inches, and for want of the proper temperature to cause its putrefaction, it may remain unchanged and unavailable, until another plowing shall bring it up again to the influence of heat and moisture, which will disengage the ammonia. It is a frequent experience, that we plow under deeply for a spring crop, fresh stable manure, and receive no benefit from it whatever, until it is brought up again ot the surface, and the wheat crop following reaps the advantage.

But suppose, instead of making a week or two weeks' heavy labor of hauling out manure in the spring, when the teams are at best not strong, and there is a press of hard work on hand, you get rid of this necessity of hauling out and plowing under simultaneously; and hauling at your convenience, you throw the manure upon the surface of the grass field, what is the result? At the worst, as we have shown above, there is equal loss of the *free ammonia*, when the manure is plowed under. In both cases, that is about all gone, before it can be with certainty taken possession of, by any process. The mass remaining on the surface, however, the work of putrefaction, which made the free ammonia, and which was stopped by the opening and exposure of the heaps, is now recommenced and very slowly carried on by the warmth and moisture at the surface. The ammonia thus formed is absorbed by the litter above it, and washed down by every shower into contact, and combines chemically with the humus at the surface, or with the soil itself. But bear in mind, that when these frequent removals are made, we never find the heaps in such a state of putrefaction as when we postpone to some one allotted time, and therefore never have so much free ammonia to deal with. A very large proportion of the manure never begins to rot before it is removed. By this plan, moreover, we take favorable opportunities for hauling, and may carry out much of the manure in damp or moderately rainy weather, when the showers will wash the ready formed ammonia immediately into the soil.

We have thus undertaken to show, that the practice of manuring on the surface is not inconsistent with admitted chemical principles, when properly applied; and we submit the explanation to the judgment of practical men, familiar with the processes of farm management.—*American Farmer.*

For the New England Farmer.

HOW TO KEEP PARSNIPS FOR WINTER AND SPRING USE.

Let them remain in the ground as long as they can, without danger of being frozen in for the winter. Then dig them, cut off the tops, and pack them in boxes, barrels, or casks of any kind, cover them with moist earth, shaking it down so as to fill pretty solid; cover over the tops so as to keep out too much wet, and let them stand out of doors until they are well frozen, then move the vessels into the cellar, being careful not to disturb the roots, and let the frost work out gradually. The best parsnips that I have ever eaten were treated in this manner, and they were in fine eating order, from the middle of January to the middle of June. Those that follow the old method of letting their parsnips remain in the ground until spring, cannot know how much they lose in good eating, and economy. I think that parsnips would be a profitable crop to cultivate for feeding stock, particularly swine, since the failure of the potato. To insure a good crop, and good roots, be very particular in the choice of seed; always choose the largest, smoothest, and best shaped roots to raise seed from, and see that no wild parsnips are suffered to grow in their neighborhood.

MRS. N. DARLING.

New Haven, Conn., Nov. 6th, 1857.

HOW CAN SETTING HENS BE TAUGHT TO FORSAKE THE LAZY HABIT?

Make a small open pen, of laths, or some similar material, in one corner of your hen-house, about eight inches wide, and of any convenient length and height. Let one of the laths or slats be so secured that it may be easily taken out, or moved one side, so that a hen may be conveniently passed into or taken out of the pen. On the bottom of this pen, and running lengthwise through it, set up a couple of laths on edge, and fasten them about the same distance from each other, and from the sides of the pen. Run a small perch across the pen and the work is done. When a hen wishes to set, put her in there. She will soon find that she can walk leisurely upon the floor, or roost comfortably upon the perch, but she can't set without "riding on a rail," and that, they seem to think, isn't decorous. The length of time for which they will have to be confined will vary somewhat, and in obstinate cases it may be necessary to put a few pegs or tacks into the edges of the laths.—*Genesee Farmer.*

HENS.—If the legs of hens become broken, they will lay their eggs without shells until the fracture is repaired, all the lime in the circulation being employed for the purpose of reuniting the bones.—*Ohio Valley Farmer.*

HYBRIDIZATION.

MR. BROWN:—In reading the address delivered by A. R. POPE, before the *Middlesex Agricultural Society*, I noticed a few remarks upon the *hybridization of plants.* Will you please inform me through the columns of the *Farmer*, concerning the manner in which it is performed.

A. DEWOLF.

Deerfield, Mass., Oct. 12th, 1857.

REMARKS.—Shake the pollen or dust of the blossoms of one species into the blossom of another, and that makes a cross, and is called hybridization. The subject is one of interest, and ought to be better understood than it is. We have examined some authorities, and give the following as a brief illustration of the principles involved in the process.

Observing that farmers who rear cattle improve the progeny by means of *crossing* the breed, Mr. KNIGHT argued from analogy, that the same improvement might be introduced into vegetables. His principal object was that of procuring new and improved varieties of the apple and pear, to supply the place of such as had become diseased and unproductive. But as the necessary slowness of all experiments of the kind, with regard to the fruit in question, did not keep pace with the ardor of his desire to obtain information on the subject, he was induced to institute some experiments upon the common pea; a plant well suited to his purpose, both from its quickness of growth, and from the many varieties in form, size and color which it afforded. In 1787, a degenerate sort of pea was growing in his garden, which had not recovered its former vigor even when removed to a better soil. Being thus a good subject of experiment, the male organs of a dozen of its immature blossoms were destroyed, and the female organs left entire. When the blossoms had attained their mature state, the pollen of a very large and luxuriant grey pea was introduced into the one-half of them, but not into the other. The pods of both grew equally; but the seeds of the half that were unimpregnated, withered away without having augmented beyond the size to which they had attained before the blossoms expanded. The seeds of the other half were augmented and matured, as in the ordinary process of impregnation; and exhibited no perceptible difference from those of other plants of the same variety; perhaps because the external covering of the seed was furnished by the female. But when they were made to vegetate in the succeeding spring, the effect of the experiment was obvious. The plants rose with great luxuriance, indicating in their stem, leaves, and fruit, the influence of this artificial impregnation; the seeds produced were of a dark grey. By impregnating the flowers of this variety with the pollen of oth-

ers, the color was again changed, and new varieties obtained, superior in every respect to the original on which the experiment was first made, and attaining, in some cases, to a height of more than twelve feet.

The practicability of improving the species is rendered strikingly obvious by these experiments; and the ameliorating effect is the same, whether by the male or female; as was ascertained by impregnating the largest and most luxuriant plants with the pollen of the most diminutive and dwarfish, or the contrary. By such means, any number of species may be obtained, according to the will of the experimenter, amongst which some will no doubt be suited to all soils and situations.—KNIGHT's experiments of this kind were extended also to wheat; but not with equal success; for though some very good varieties were obtained, yet they were found not to be permanent. But the success of his experiments on the apple tree were equal to his hopes. This was, indeed, his principal object, and no means of obtaining a successful issue were left untried. The plants which were obtained in this case were found to possess the good qualities of both of the varieties employed, uniting the greatest health and luxuriance with the finest and best-flavored fruit.

Mr. Pope's process in hybridizing was probably a similar one. When corn mixes, as we term it, it is a process of hybridization. On referring to LINDSEY, KNIGHT, or LOUDON, our correspondent will find the matter treated so as to give him a pretty clear idea of it. It is also briefly touched on in Downing's late edition of the Fruits and Fruit Trees of America.

A VEGETABLE CURIOSITY—THE TUMBLE WEED.

Among all the examples chosen from the innumerable productions of nature to illustrate natural theology, I do not recollect to have seen the tumble weed, at it is commonly called, (I have not looked out the botanical name,) and yet if it is not a speaking witness, it is a living, moving witness that there is an intelligent creature. These may be seen moving across almost any of the large western fields in the fall of the year, and remain all winter in the corners of the fences, as if stationed to remind the passer-by that there is a God. I have just brought one of these weeds into my study. It is of the common form, and a little above the common size. It resembles a gooseberry bush, or it is of the general form and size of a farmer's corn-basket, and so nearly round or globular that a light wind will roll or tumble it along upon the ground, dropping its countless seeds all the way. And nature has not only given it this self-threshing and self-sowing power, but has connected with it a provision for getting loose. The strong thick root becomes so weak about an inch below ground, just as the weed gets ripe that a light wind will hurl it about in every direction.

For the New England Farmer.

"YOUNG MEN AND THE FARM."

MR. EDITOR:—The article in your journal of October 30, vol. 12, No. 44, under the above title, attracted my attention, and, being one of those to whom it was addressed, and whom the advice therein contained was intended to benefit, I thought, before acting upon said advice—and the time draws near when I shall choose my vocation—that I should like to propound a few questions to the author of the article above referred to. If he is advising "young men" for their good, he can easily answer them.

1st. Would you advise one to remain on the "old farm," and with the "old man" to "cultivate the productive vineyard which God gave for an inheritance," when said vineyard, in return for unremitting labor from sunrise till sunset, year after year, will hardly yield sufficient to board and clothe the family in the most common manner, and render it possible to keep one room in the house comfortable, during our long, cold winters?

2nd. Would you advise one to remain on the "old farm," where it is absolutely necessary that the females should struggle with their household duties from early morn, even before the sun gladdens the earth with its golden rays, until nine or even ten—as is too often the case—in the evening, destroying their health, cramping and weakening that intellect, which, when properly developed, transforms the woman into an *angel* who will minister to the wants of man, and strew his rugged path with flowers?

Would you advise me, then, to remain upon a farm, the household duties of which tax the female strength even beyond its power of endurance? If so, suppose another female should be added to the group which now struggles so hard for a living?

Lastly:—Would you advise one to remain on a farm which affords but few *moments*, occasionally, for study, and still fewer *means*, and less time to the women—who ought to have the most—than to the men?

If you do advise me, and other "young men," to remain upon such farms, please inform us in what manner farmers may afford to give their "women folks" a reasonable length of time, daily, and the means *for study*; for, as our farms are now conducted, females must be as *slaves*. Also, be kind enough to inform me, how I may gain time and the means for study, being penniless, and rest assured that your advice, "to remain upon the old farm, and with the old man," will be strictly followed, by A FARMER'S SON.

North Bridgewater, Nov., 1857.

REMARKS.—It is probable that only some general advice can be given "A Farmer's Son," in the midst of such an accumulation of difficulties; but his queries may draw out, from some source, valuable suggestions to all young men.

CURE FOR STAMMERING.—At every syllable pronounced, tap at the same time with the finger. By so doing the most inveterate stammerer will be surprised to find he can pronounce quite

fluently, and by long and constant practice, he will pronounce perfectly well. This may be explained in two ways, either by a sympathetic consentaneous action of the nerves of voluntary motion in the finger, and in those of the tongue, which is the most probable; or it may be that the movement of the finger distracts the attention of the individual from his speech, and allows a free action of the nerves concerned in articulation.—*Scientific American.*

For the New England Farmer.

LETTER FROM MAJOR FRENCH.

THE MONTHLY FARMER FOR NOVEMBER—MATTERS AT WASHINGTON.

MY DEAR CAPTAIN:—What do I know to interest a farmer? Well, that's a tough question for me to answer. It is not to be supposed that I know much—I, "a limb of the law," *reduced* by *reduction, ascending,* I'd have you to know, from a politician, an office-holder, an Alderman! (I have thus far escaped being *Mayor*, although I saw last summer that some of the papers honored me with that title,) to a plain, practising lawyer, it is not to be expected that I know much about farming. Still I read the Monthly *New England Farmer* as regularly as I ever did the *New Hampshire Spectator* when it was my own darling bantling!

I intended to have enlightened you, and your readers, futher about the United States Agricultural Exhibition at Louisville, and believe I promised to do so, but I broke that promise about as short off as ever an Irishman did the stem of his *dudheen*, and the why it was done was, that I left Louisville very unexpectedly the day prior to the closing of the exhibition, and my time and attention was so entirely engrossed by other matters, that I could find no time to post you up even for the short time that elapsed between the closing of the letter which I sent, and the hour of my leaving the grounds, 10 A. M. on Friday; and if the whole concern had been sunk by an earthquake in five minutes after I left it, I could not have heard, or known less about its closing hours, or its results, than I now do.

Would you like to know the reason why, at this particular time, I have undertaken to write you a letter? Well, you shall have it. I took up the November number of the *Farmer* this morning, and read it pretty thoroughly through. It interested me much more than usual; the articles struck a corresponding chord in my *Agriculto musical* gamut, and my feelings responded as you have doubtless heard the chords of a piano respond to the notes of another musical instrument played in the same room, and the feeling came irresistibly over me, that I must write to you, and so I am writing!

"*John Dunlap*," "ha! ha! ha!" so I exclaimed, and so I laughed, when I saw that old familiar name. Why, Governor, I am on the shady side of a half century, considerably so, and yet among the very earliest recollections of my boyhood, "*Johndun*," for that's what we used to call him, and for many years I supposed his name actually was "Johndun Lap," figures in the foreground. He was *the* ingenious fellow of the neighborhood. He could tinker a clock, mend a watch, solder a hole in a tin pan, doctor men, women, horses and cattle, write poetry, compound root beer, manufacture fulminating powder, cast small cannons, &c. &c. For years I have not heard of him, till I saw his familiar name, and back came his familiar face, and such a host of familiar scenes of my boyhood, that I revelled for a good hour in the past, and blessed my *old* friend—he must be pretty old now—for writing that note so characteristic of himself. I hope some person more scientific on the subject of wasps than I am, will answer his question.

I was not a little amused at the difference of opinion expressed by different writers about the *sorghum*. There is your correspondent "I." of Princeton, Mass., who is down on the "wonderful cane" worse than "a thousand of brick," fully equal to an entire brick wall thirty feet high, and a hundred feet long! he does not believe in it, not by *any* means; and "J. D. Canning," *he* thinks common corn stalks will make as good molasses as the sugar cane. "J. H. N.'s" experience is somewhat more encouraging, though not by any means up to the wonderful *theoretical experience* expressed a year or more ago, by the sanguine. "J. H. N's" pig did not show any remarkable fondness for it as fodder, and his cow exhibited her want of *good taste* in the same way. My cow is a *female* who knows what's good, and she made way most ravenously with a small patch which I raised in my garden merely for fodder. "L. W. M." tried his hand at syrup, making it with the sugar cane and with *corn stalks*, and the corn stalks beat all hollow, both in the production of quantity and quality! which very properly led your friend "L. W. M." to the conclusion that the *wonderful sorghum* was pretty much another *wonderful Moras Multicaulis* humbug! And then we come to your own, "*one hour's* experience on the first sugar estate of Massachusetts." You ought to have staid longer, Governor. "An hour" wont do to find out all the mysteries of Chinese sugar cane! However, your advice is excellent, and is not backed up by the undue expression of either hopes or fears. You are calm, "calm as a summer's morning," and the motto in *Gil Blas*, "patience, and shuffle the cards," hits your ideas exactly; patience, and try the experiment fairly and carefully before condemning, is what you desire, and you are right; but I rather guess when it is thoroughly tried to the end, the end will be found somewhat more *bitter* than *sweet!* The cane I raised here, grew well, and to the height of from ten to fifteen feet. I had not sufficient to try any saccharine experiments, and so used it for fodder in September, and for that purpose I have no doubt it will be valuable, "J. H. N.'s" cow to the contrary notwithstanding. But for sugar, I think I should prefer one good rock maple tree, to considerable of a lot of sorghum.

Judge French's letters from Europe are a shining light to your pages. He certainly *observed* well and thoroughly during his travels, and he possesses, beyond almost any writer within my knowledge, the faculty of enlivening his descriptions with queer and witty suggestions, which provoke a laugh, while reading of the most serious matters. Who can read his description of the relics exhibited in the Church of St. Ursula at Cologne, with a sober countenance? And the conclusion which follows his description of oxen

drawing by their heads, and women carrying burdens on theirs, "that cattle and women are stiff-necked enough for most practical purposes," and his consoling idea, when he lost his umbrella at Waterloo, that the guide would probably "dig it up next year and sell it as Napoleon's," are fair specimens of his manner of adding a lively thought to a sober subject. You and I *have a right* to think well of the Judge's writings, and speak well of them too, for did he not come to man's estate under our eyes, and our bright examples!

Another chapter of contradictory opinions contained in the number of the *Farmer* before me, exists in the articles relative to that rascally destroyer of fruit, the curculio. Mr. Underwood thinks the keeping of fowls among the fruit trees is a certain remedy, while, *per contra*, Mr. "J. B. G." thinks quite the reverse. There is something very curious in regard to the ravages of this insect. My garden formerly contained quite a number of plum trees, and year after year, almost every plum was destroyed by the curculio. One year, three or four years ago, not a curculio was to be seen; the plums grew unmolested, and ripened beautifully, and I flattered myself that in some miraculous manner, that pest of the orchardist and plum-grower had got his quietus; and the following spring I entered with a hopeful spirit, on the preparation of my trees for the production of a harvest of fruit; but, alas, alas, I had crowed too soon; the bloom was superb, the young fruit came in abundance, and so did the curculios! and not a perfect plum was left.

From that time I gave up. I believe I have but one plum tree left, "the Washington plum," that blooms and produces young fruit in abundance annually, which is annually destroyed by that "ugly bug," and it is now some three or four years since I have had the pleasure of eating a fair ripe plum from my own garden. I undertook to console myself by raising pears, and had a half a dozen trees planted, which grew and began to produce as fine fruit as I ever saw. A handsomer bloom than that of last spring could not be desired, and the fruit set in abundance; in June or July, the ends of some of the limbs began to turn black. I carefully cut them off, the disease did not stop, and I cut and cut, till I was tired, and of six as thrifty trees as you ever saw, there are five as black and dead as if they had been cut off at the ground in July. A single one remains, which gave me a good crop of the Seckel pear, and I expect that will "depart this life" next year. I do not see why the others did, or why this should not! In September, I was at the house of a friend in Ohio, and in passing around his grounds, I saw pear tree after pear tree as black as if its leaves had been made of ebony. I remarked, "you have the fire blight among your pear trees, I perceive." "Yes," said he, "and fear I shall lose them all." "Is there no remedy?" I asked, upon which he told me this anecdote. A gentleman well known to him, who had a fine pear orchard which was in the process of destruction, was asked what he thought of spiritualism. He replied that he had heard much about it, and of many wonderful revelations from the spirit-world, but never any thing practical or useful. "Now," said he, "if you will find a medium who will ascertain, and inform me what will prevent the fire blight among pear trees, and if it proves successful, I will give five hundred dollars." My friend added, "the medium has not yet made the discovery, and therefore I know no remedy!"

I have in my garden three crops that *never fail*, grapes, figs and *weeds!* The Isabella and Catawba grapes ripen in perfection, and we have as many as we desire to eat from August to November. We have two crops of figs every year; one in July, and another in October. They grow large, ripen finely, and are delicious, and as yet nothing has appeared to mar either my grapes or figs.

I believe I have commented on the *Farmer* sufficiently for once, but my *better half* is anxious to be informed, whether, when you give hens cayenne pepper to make them lay, *the eggs will want peppering when cooked!*

Notwithstanding the smashing and cracking among banks and individuals, Uncle Sam goes on in the even tenor of his way here. The extension of the Capitol, the Post Office building, the Treasury building, the Patent Office, the building of the Aqueduct, and other public works, go on rapidly, and thousands of men, who would, were it not for these works, be out of employ, are blessed with "leave to toil," and are happy in the enjoyment of that blessing.

The new Hall of the House is progressing fast to completion, and, it is said, will be ready for the reception of the next House of Representatives on the first Monday in December. The new Senate Chamber is not so forward, but is progressing, and both are perfectly magnificent rooms.

The first row of columns upon the dome is in process of erection, about half of them are up. I asked a workman the other day, while standing on the foundation of the dome, how long it would take to complete it; his reply was, "seven years." I do not think he fixed the time any too long, and my belief is that in ten years the extensions and dome will not more than be completed. All the streets around the Capitol are filled with marble, and I cannot turn my horse and carriage at my own door, so completely is East Capitol Street encumbered with marble. From the eastern gate to Third Street, this street, one hundred and sixty feet in width, is, with the exception of a narrow carriage way, completely blocked up, and so are First Street, A Street, North and South, N. J. Avenue, the space in front of the Capitol, and the circular street north of it. I mention this by no means in a complaining mood, but as evidence of what is yet to be done.

The times prognosticate a good deal of distress among the poor here and elsewhere. I hope, for their sake, we may have a mild winter. The weather now is summer-like, thermometer indicating seventy-four degrees, in the open air.

Ever thine, B. B. FRENCH.

Washington, Nov. 9, 1857.

CELESTIAL SUGAR CANE.

The *Nasta Reporter* having published an account of a fall of sugar in that locality, from the heavens, which called forth the doubts of a portion of the press, thereupon that paper comments on the phenomena as follows:

"We repeat that our statements were correct. Not only so, but on Friday night, 11th inst., the

celestial sugar makers, having a special regard for our reputation for veracity, sent another shower of the same sort in the same neighborhood, which covered the ground for miles with sugar. We call it sugar, because it looks, feels and tastes like sugar, and nothing else, and we know no better name for it.

Whether it is solidified honey-dew, the saccharine juice of the sugar pine, taken up, brought from afar and dropped in crystals by some atmospheric *hocus pocus*, or the leakings from celestial refinery, we do not pretend to say. We saw three small boxes of the article, and have one of them now before us. Some of the specimens before us are three-fourths of an inch long, and of the diameter of a small goose-quill. One person at Clear Lake made half a gallon of fine syrup by dissolving these crystals."

For the New England Farmer.

THE SEASON AND THE CROPS.

MR. EDITOR:—After the growing season is completed, and the crops all gathered in, it may be well to look back and recount those meteorological phenomena of the past, which have brought about those results on which the farmer depends for his prosperity. The five months of the growing season, from May to September inclusive, have been one degree and eighty-three hundredth (1.83) colder than the average of the same months in the four preceding years, and one degree colder than last year, the coldest of the four; while rain has been quite abundant—twenty-two inches having fallen in the five months. In May there fell five inches and sixty-four hundredths, (5.64); June, 5.50; July, 3.93; August, 5.19; September, 1.75. While last year, May, June and July were rather dry, and August excessively wet. The first thunder was heard on the 28th of May. Thunder was frequent through June and July, and but little in August and September. The first light frost occurred on the morning of September 7th, and the first frost hard enough to kill vegetables, on the 30th, which was not very severe.

There has been five months this year already colder than the same months in any of the four preceding years, namely, January, April, June, July and September, while February has been the only month warmer than any of the four preceding years.

The first twenty days of June were characterized by a low temperature and wet weather. We had no frost in June, but a temperature frequently bordering on frost, which kept corn in a backward state. We had no east wind to blast the fruit blossoms, except a light aspiration on the evening of the last day of May. June had a mean temperature of 60.43 degrees, being 4.49 degrees colder than the mean of the four preceding years, and 2.20 degrees colder than 1856, the coldest of the four. Rain fell on sixteen days.

July had a mean temperature of 69.42 deg., being 0.88 colder than the mean of the four preceding years, and 2.62 deg. warmer than 1853. Its maximum heat of 88 degrees, occurred on the 15th, and was three degrees colder than the extreme of 1856. Rain fell on sixteen days. The temperature affected the corn crop unfavorably, by keeping it in a backward state, while it preserved its vital energies for the succeeding months.

August had a mean temperature of 65.35 deg., which was more favorable, though a little colder than the mean of the four preceding years, and nearly two degrees warmer than last year. Rain fell on sixteen days, but much less in quantity than last year. The favorable weather of this month redeemed the corn crop from destruction, or there would have been a total failure, as in 1816. It is a singular coincidence that rain should fall on an equal number of days in three successive months.

September had a mean temperature of 57.13 degrees, and was 1.50 degrees colder than the four preceding years, with a little less than the average amount of rain. Rain fell on ten days. The lowest temperature was 33 degrees, on the morning of the 30th, when the first hard frost occurred; previous to this time there was not frost enough to kill tender vegetables, and consequently corn had a good opportunity to ripen. Corn is much less than an average crop; although well ripened, the ears are short and poorly filled. There has probably not been a more unfavorable season in this vicinity since 1816. Wheat has been a partial failure. The weevil and the rust have done their work of destruction to a great extent, but there is a new enemy in the field—a small striped worm about one-tenth of an inch long, perforates the kernel at the germ, after the kernel is grown, and while in a milky state, and destroys the flour, while the kernel retains its original shape. Although this insect has done but little damage, and has been noticed by few, yet it may be well to record the fact, as it may prove a formidable enemy in coming years. Its name, history and habits are all involved in obscurity. The perfect insect is unknown. I have seen but a single larva, out I examined the crop at harvest, and witnessed their depredations, but they were gone. Can you or any of the readers of the *Farmer* give more light on the subject?

No crop this year has yielded more bountifully than oats. No enemy destroys the crop, and the low temperature and wet weather were congenial to their growth.

Potatoes are below a medium crop. Although the season has been a wet one, potatoes have not attained their usual growth. The rot in many instances has done considerable damage, but not much more than usual, and at present there appears to be no scarcity.

The grass crop was excellent in growth, but owing to the wet weather it sustained much damage in curing, besides losing a portion of its gum in the growing season, so that in nutritious qualities it may not much exceed a medium crop.

There is a moderate crop of fruit, and of the various kinds; apples are the most abundant, being sufficient in quantity to supply the demand. Plums are nearly a total failure, for nearly the whole crop was destroyed by the curculio. Grapes are a fair crop. Walnuts, butternuts and some wild fruits are remarkably abundant.

Among the periodical phenomena, we notice the appearance of various kinds of migratory birds. Blue-birds appeared March 17th; Robins, March 26th; Whip-poor-wills, May 5th; and Barn Swallows, May 9th. Grass, first appearance

of growth, April 6th; general leafing of forest trees, May 23d; barn swallows finally disappeared, Aug. 29th, although most of their number were gone a week or two previous. General fall of forest leaves took place Oct. 22d.

Such are the results of a meteorological record of 1857, with three observations daily—at 7 A. M., 2 P. M., and 9 P. M., besides observations of other casual and periodical phenomena, and a comparison of them with the four preceding years.

D. BUCKLAND.

Brandon, Vt., Nov. 10th, 1857.

REMARKS.—We are obliged to our attentive correspondent for this review of the past season, and the state of the crops. Among the best works on entomology are Harris's "Insects Injurious to Vegetation," Fitch's Treatise, Kollar, a German writer, and Kirby and Spense. There are others of distinguished ability, but these are the popular works in use. Harris's work may be found at the bookstores in Boston, but we do not know at what price.

For the New England Farmer.

THE THINGS I RAISE.

SWEET POTATO.

This crop is one of uncertainty, though, if started early in hot-beds, and set out on dry, sandy land, you are pretty sure of getting a fair crop of potatoes of good quality. Two years ago my sweet potatoes were better in quality than any I could buy. They are not profitable, however, as I raise them, purchasing my slips in Boston at a dollar a hundred, and have from twenty-five to fifty per cent. of them die, and then the risk of the season for the remainder. I think on a light, early soil, with my own plants started early, I could make it profitable growing this crop. Those persons who raise the slips make a large profit, as each potato yields so many slips; for as soon as one set is removed others appear, and so on.

DIOSCOREA BATATAS, OR CHINESE YAM.

There has been a great noise made about this new tuber, some claiming that it will entirely displace the potato, which, of late years, is so liable to rot, while this yam is not at all subject to that evil. I believed it a humbug, but purchased two roots of Messrs. Hovey & Co., last spring, for which I paid fifty cents each; these were planted whole, being about fifteen or eighteen inches long, and one or one and a half in diameter, in the largest part. These yams do not grow as some other sorts of yams, horizontally in the ground, but they run down like a parsnip, being, as the boy said of the flip iron, "biggest at the little end," that is, they are quite small at the surface of the ground, and continue small for eight or ten inches, when they begin to grow larger for the next eight or ten, and then taper off very fast in the next three or four inches to quite a short point in some instances, while in others they are largest at the extreme lower end. The color is white outside and in; when boiled, of a bluish white, like boiled rice, and having much the same taste; sticky and starch-like, not mealy like a ripe potato, though I presume they would be where the season was long enough to allow them to ripen. The tops or vines trail on the ground like the sweet potato, running often twelve or fifteen feet, and are readily eaten by cattle. They may be staked up like pole beans, or left to run over the ground.

The root that is planted decays, and other tubers appear, from one to three in a hill, often not more than one, but that of a large size; one of my roots yielded two yams that weighed together four pounds, the other one weighed two and a half pounds. On the tops or vines were produced scores of little seed yams that will answer for next year's setting. The yams may be grown from slips like the sweet potato, or cut in pieces and planted like the common potato, or from the little seed yams. It requires three years for these small ones to become large. It is said that they will remain in the ground through the winter without injury, but I have not tried it. It seems to delight in a deep, rich, sandy loam, though I should not advise putting strong manure in contact with the tubers. I have changed my mind somewhat, in regard to it, and would recommend it for further trial, though I think it is much easier and cheaper to grow potatoes, if they do not rot. I intend to plant a few next season to test them more thoroughly. I would here caution all those who grow them for the first time to be careful in digging them, for they are very brittle, and snap like pipe stems; they cannot be pulled on account of the form, but must be dug out, which work is very much like digging a well, for they often extend down twenty-five to thirty inches. An immense quantity could be grown on an acre, for they take up but little surface, the roots invariably tending downwards.

JAMES F. C. HYDE.

Newton Centre, Nov. 10th, 1857.

For the New England Farmer.

ILLINOIS.

Times in—Prices of Wheat and other Grains—Frost and Snow—Prairies on Fire—Rapid Growth of Villages—Nature and Productiveness of the Soil—Error in regard to Potatoes.

Although some time has elapsed since I last wrote, I have not forgotten my promise. During this lapse of time, what great changes have passed over the people of the United States. Three months ago, how many were sailing gracefully upon the tide of prosperity who are now in poverty, and how many are now in large cities of the East, who know not where to get their bread, and a cold winter staring them in the face!

The financial panic of the East has cast its dark shadow over Illinois. There is little money in circulation, compared with three months ago. Every thing down to the lowest figure. We are overflowing with grain of all kinds, and it is worth little or nothing. Wheat down to 50 cts., oats 17 cts., and still going down, down, down; cows that could not be bought for $30, three months ago, are now down to $18. Every thing is coming down but land—that is still up.

We are having the finest weather imaginable. The ground has frozen twice this fall, but not a snow flake has yet graced our prairies. The fall has been very dry. Now is the time for fires. To those who never saw a prairie on fire, it is dif-

ficult to describe the magnificence of the scene. What can be more beautiful than to look out in a dark night and see the heavens illuminated in every direction by them.

I believe in my letter to you, of August 18th, I did not say much in regard to this place, and the farming country in general. I will describe this village, of only two years' existence. The inhabitance number about one thousand; we have one church, one school-house, three hotels, and ten stores; a steam grist mill will soon be completed. So much grew up on a wild prairie in two years. The prairies about here are rolling, but not enough to hinder cultivating them all. The soil is from two to three feet deep, and is very black, rich and productive. The wheat crop usually averages from 20 to 30 bushels per acre; oats 60 to 80; corn sometimes exceeds 100 bushels; potatoes, from 200 to 300 bushels are not an uncommon yield, and of the first quality. I was very much disappointed in this respect, for well do I remember of my friends telling me before coming West, that I could never even raise good potatoes in Illinois. But I never saw in Vermont, or any other State, better or larger potatoes than have been raised here. When Eastern people come West, they generally remark, "You cannot raise good potatoes here, I suppose." This idea seems to prevail in the minds of Eastern people, to a great extent; but they are in error in regard to it. D. J. BENTON.

Manee, Ill., Nov. 5th, 1857.

PLEASURE OF READING.

Of all the amusements that can possibly be imagined for a working man, after daily toil, or in the intervals, there is nothing like reading a newspaper or a book. It calls for no bodily exertion, of which already he has had enough, perhaps too much. It relieves his home of dulness and sameness. Nay, it accompanies him to his next day's work, and gives him something to think of besides the mechanical drudgery of his everyday occupation; something he can enjoy while absent, and look forward to with pleasure. If I were to pray for a taste which would stand by me under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against all its ills, however things might go amiss, and the world frown upon me, it would be a taste for reading.—*Sir John Herschell.*

WARMTH OF THE SOIL.

The warmth of the soil, under a clear sun, is surprisingly above that of the air, the difference being, even in temperate climates, as high as sixty-five degrees. Thus Schubler finds in July, when the air is 81 degs., the soil will be 146 degs.; and during one of his observations at Tubingin, in Germany, the air stood at 78 degs. and the soil at 152 degs., a difference of 74 degs.! With surfaces of the same color, the materials composing the soil make little difference in its capacity to become heated provided they are in similar states as to dryness. Sand, clay, loam, garden-mould, &c., show very little difference with the thermometer. Color, however, has a powerful effect. Although exposed to the sun for hours, differently colored earths never attain the same temperature, the lighter colored always remaining considerably cooler. The conclusion seems inevitable that in some countries the surface soil must occasionally approach 200 degs. Fahrenheit. Under such a degree of heat the decomposition of the organic matter of the soil must go on rapidly, with the evolution of much ammonia and carbonic acid, agents which play an important part in the modification of the mineral matter of the soil, as well as stimulate vegetation.—*Anon.*

MR. EVERETT'S ADDRESS,

DELIVERED BEFORE THE NEW YORK STATE AGRICULTURAL SOCIETY AT BUFFALO, OCTOBER 9, 1857.

We have perused this address with more gratification than we ever did one on similar subjects, and for several reasons. Mr. Everett is a ripe scholar, and has, as the address indicates, explored books so thoroughly as to gather from them what it is that confers upon the physical condition of man the largest amount of permanent happiness. He is also acquainted with various phases of human life,—for to his scholarship may be added his experience as a statesman, both at home and abroad, and that gained while presiding over the interests of perhaps the highest institution of learning in our land. And while this address gives evidence of close study, and even deep research, it shows that Mr. Everett's observation of the different occupations of men and their influences upon their lives, has been active and intelligent. The editor of the Buffalo *Advertiser*, who listened to the eloquent words of which we are speaking, says:—"It is not too much to say that this last effort of the accomplished orator is equal to anything that he has yet given to the world. Nothing could have been more appropriate to the occasion, more complete in every part, and more richly freighted with noble ideas and brilliant passages. In its practical common sense as well as in its masterly eloquence, the address will stand unequalled amongst similar productions, casting the past into the shade and furnishing a model for the future. There are certain portions which must remain impressed upon the memory of all who listened. Amongst these are the magnificent denunciation of the doctrine which holds that a miracle cannot be worked upon this earth; the allusion to the heroes of former, and the great statesmen of our own days, who have devoted such of their time as was not given to their country, to agricultural pursuits; the withering denunciation of the stock gamblers of Wall Street; the comparison of the fever of city life with the calm repose enjoyed by the dweller in the country; and the picture, unrivalled by the pencil of Goldsmith, with which the splendid address was brought to a close, and which impressed us with the idea, as the voice of the orator ceased,

that we had just turned from the contemplation of a beautiful painting."

We abbreviate this noble production with great reluctance, but are entirely unable to give it all. It should be published in cheap pamphlet form, and a copy preserved not only in every farm-house in the land, but in the counting-room of every merchant in the land,—for after all, it is he who needs it most. We suggest, also, that the Massachusetts Society for the Promotion of Agriculture should place it in the compilation which we understand they contemplate issuing. We gladly yield our usual editorial space, and will give all we can find room for.

AGRICULTURE REQUIRES THE RESOURCES OF SCIENCE AND ART.

But although Agriculture is clothed with an importance which rests upon the primitive constitution of our nature, it is very far from being the simple concern we are apt to think it. On the contrary, there is no pursuit in life, which not only admits, but requires for its full development, more of the resources of science and art, —none which would better repay the pains bestowed upon an appropriate education. There is, I believe, no exaggeration in stating that as great an amount and variety of scientific, physical, and mechanical knowledge is required for the most successful conduct of the various operations of husbandry, as for any of the arts, trades, or professions. I conceive, therefore, that the Legislature and the citizens of the great State over which you, sir, (Governor King,) so worthily preside, have acted most wisely in making provision for the establishment of an institution expressly for agricultural education. There is a demand for systematic scientific instruction, from the very first step we take, not in the play-farming of gentlemen of leisure, but in the pursuit of husbandry as the serious business of life.

A NEW WORLD OF AGRICULTURAL RESEARCH.

But when science and art have done their best for the preparation of the soil, they have but commenced their operations in the lowest department of agriculture. They have dealt thus far only with what we call lifeless nature, though I apply that word with reluctance to the generous bosom of our mother Earth, from which everything that germinates draws its life and appropriate nourishment. Still, however, we take a great step upward, when, in pursuing the operations of husbandry, we ascend from mineral and inorganic substances to vegetable organization. We now enter a new world of agricultural research; the mysteries of assimilation, growth and decay; of seed-time and harvest; the life, the death, and the production of the vegetable world. Here we still need the light of science, but rather to explore and reveal than to imitate the operations of nature. The skilful agricultural chemist can mingle soils and compound fertilizing phosphates; but, with all his apparatus and all his re-agents, it is beyond his power to fabricate the humblest leaf. He can give you, to the thousandth part of a grain, the component elements of wheat,—he can mingle those elements in due proportion in his laboratory,—but to manufacture a single kernel, endowed with living, reproductive power, is as much beyond his skill as to create a world.

Vegetable life, therefore, requires a new course of study and instruction. The adaptation of particular plants to particular soils and their treatment, on the one hand, and, on the other, their nutritive powers as food for man and the lower animals, the laws of germination and growth, the influences of climate, the possible range of improvability in cereal grains and fruits, are topics of vast importance. The knowledge—for the most part empirical—already possessed, upon these points, is the accumulation of the ages which have elapsed since the foundation of the world, each of which has added to the list its generous fruit, its nutritive grain, its esculent root, its textile fibre, its brilliant tincture, its spicy bark, its exhilarating juice, its aromatic essence, its fragrant gum, its inflammable oil—some so long ago that the simple gratitude of infant humanity ascribed them to the gift of the gods, while others have been brought to the knowledge of the civilized world in the historical period, and others have been presented to mankind by our own continent. No one can tell when wheat, barley, rye, oats, millet, apples, pears, and plums, were first cultivated in Europe; but cherries and peaches were brought from the Black Sea and Persia in the time of the Roman republic; the culture of silk was introduced from the East in the reign of Justinia; cotton and sugar became extensively used in Europe in the middle ages; maize, the potato, tobacco, cocoa, and the Peruvian bark, are the indigenous growth of this country. Tea and coffee, though productions of the Old World, were first known in Western Europe about two centuries ago; and India rubber and gutta percha, as useful as any but the cereals, in our own day.

THE DOMESTIC ANIMALS ATTACHED TO THE SERVICE OF MAN.

But there is still another department of Agriculture, which opens the door to research of a higher order, and deals with finer elements,—I mean that which regards the domestic animals attached to the service of man, and which are of such inestimable importance as the direct partners of his labors, as furnishing one of the great articles of his food, and as a principal resource for restoring the exhausted fertility of the soil. In the remotest ages of antiquity, into which the torch of history throws not the faintest gleam of light, a small number, selected from the all but numberless races of the lower animals, were adopted by domestication into the family of man. So skilful and exhaustive was this selection, that three thousand years of experience—during which Europe and America have been settled by civilized races of men—have not added to the number. It is somewhat humbling to the pride of our rational nature to consider how much of our civilization rests on this partnership; how helpless we should be, deprived of the horse, the ox, the cow, the sheep, the swine, the goat, the ass, the reindeer, the dog, the cat, and the various kinds of poultry. In the warmer regions, this list is enlarged by the llamas, the elephant, and the camel, the latter of which, it is not unlikely, will be extensively introduced in our own south-

ern region. It may be said of this subject, as of that to which I have already alluded, that it is a science of itself. No branch of husbandry has, within the last century, engaged more of the attention of farmers, theoretical and practical, than the improvement of the breeds of domestic animals, and in none, perhaps, has the attention thus bestowed been better repaid. By judicious selection and mixtures of the parent stock, and by intelligence and care in the training and nourishing of the young animals, the improved breeds of the present day differ probably almost as much from their predecessors a hundred years ago, as we may suppose the entire races of domesticated animals do from the wild stocks from which they are descended. There is no reason to suppose that the utmost limit of improvement has been reached in this direction. Deriving our improved animals as we generally do from Europe,—that is, from a climate differing materially from our own,—it is not unlikely that, in the lapse of time, experience will lead to the production of a class of animals, better adapted to the peculiarities of our seasons than any of the transaltantic varieties as they now exist. The bare repetition of the words draft, speed, endurance, meat, milk, butter, cheese and wool, will suggest the vast importance of continued experiments on this subject, guided by all the lights of physiological science.

AGRICULTURE MORE FAVORABLE THAN CITY LIFE.

I do not claim for agricultural life in modern times the Arcadian simplicity of the heroic ages; but it is capable, with the aid of popular education and the facilities of intercommunication, of being made a pursuit more favorable than city life to that average degree of virtue and happiness to which we may reasonably aspire in the present imperfect stage of being. For the same reason that our intellectual and moral faculties are urged to the highest point of culture by the intense competition of the large town, the contagion of vice and crime produces in a crowded population a depravity of character from which the more thinly inhabited country, though far enough from being immaculate, is comparatively free. Accordingly, we find that the tenure on which the land is owned and tilled—that is, the average condition of the agricultural masses—decides the character of a people. It is true that the compact organization, the control of capital, the concentrated popular talent, the vigorous press, the agitable temperament of the large towns, give them an influence out of proportion to numbers; but this is far less the case in the United States than in most foreign countries where the land is held in large masses by a few powerful land-holders. Divided as it is in this country into small or moderate-sized farms, owned, for the most part, and tilled by a class of fairly educated, independent, and intelligent proprietors, the direct influence of large towns on the entire population is far less considerable than in Europe. Paris can at all times make a revolution in France: but not even your imperial metropolis could make a revolution in the United States. What the public character loses in concentration and energy by this want of metropolitan centralization, is more than gained by the country, in the virtuous mediocrity, the decent frugality, the healthfulness, the social tranquillity of private life.

EVIDENCES OF GOD'S INTERPOSING CARE ON THE FARM.

Speaking of the historian Hume, Mr. Everett says:

Did this philosopher ever contemplate the landscape at the close of the year, when seeds, and grains, and fruits have ripened, and stalks have withered and leaves have fallen, and winter has forced her icy curb even into the roaring jaws of Niagara, and sheeted half a continent in her glittering shroud, and all this teeming vegetation and organized life are locked in cold and marble obstruction; and, after week upon week and month upon month have swept with sleet, and chilly rain, and howling storm, over the earth, and riveted their bolts upon the door of nature's sepulchre;—when the sun at length begins to wheel in higher circles through the sky, and softer winds to breathe over melting snows,—did he ever behold the long hidden earth at length appear, and soon the timid grass peep forth, and anon the autumnal wheat begin to paint the field, and velvet leaflets to burst from purple buds, throughout the reviving forest; and the mellow soil to open its fruitful bosom to every grain and seed dropped from the planter's hand, buried but to spring up again, clothed with a new mysterious being; and then, as more fervid suns inflame the air, and softer showers distil from the clouds, and gentler dews string their pearls on twig and tendril, did he ever watch the ripening grain and fruit, pendent from stalk and vine, and tree; the meadow, the field, the pasture, the grove, each after its kind, arrayed in myriad-tinted garments, instinct with circulating life; seven millions of counted leaves on a single tree, each of which is a system whose exquisite complication puts to shame the shrewdest cunning of the human hand; every planted seed and grain, which had been loaned to the earth compounding its pious usury thirty, sixty, a hundred fold,—all harmoniously adapted to the sustenance of living nature,—the bread of a hungry world; here a tilled cornfield, whose yellow blades are nodding with the food of man; there an unplanted wilderness,—the great Father's farm,—where he "who hears the raven's cry" has cultivated with his own hand, his merciful crop of berries, and nuts, and acorns, and seeds, for the humbler families of animated nature—the solemn elephant, the browsing deer, the wild pigeon, whose fluttering caravan darkens the sky; the merry squirrel, who bounds from branch to branch, in the joy of his little life;—has he seen all this,—does he see it every year and month and day,—does he live, and move, and breathe, and think, in this atmosphere of wonder,—himself the greatest wonder of all, whose smallest fibre and faintest pulsation is as much a mystery as the blazing glories of Orion's belt,—and does he still maintain that a miracle is contrary to experience? If he has, and if he does, then let him go, in the name of Heaven, and say that it is contrary to experience, that the August Power which turns the clods of the earth into the daily bread of a thousand million souls could feed five thousand in the wilderness!

URINE.—Sir John Sinclair, speaking of the value of this fertilizing agent, says, "Every sort of

urine contains the essential elements of vegetables in a state of solution. The urine of a horse being so much lighter, would be more valuable than its dung, if both must be conveyed any considerable distance. The urine of six cows, or horses, will enrich a quantity of earth sufficient to top-dress one English acre of grass land; and as it would require about twenty dollars worth of dung to perform the same operation, the urine of a cow or horse is worth about three dollars per annum, allowing two dollars per acre as the expense of preparing the compost. The advantages of irrigating grass lands with cow urine almost exceeds belief. Mr. Hardy, of Glasgow, who keeps a large dairy in that town, by using cow urine, cuts some small fields of grass *six times*; and the average of each cutting is fifteen inches in length." If this is all true, farmers should exert their utmost efforts to economize this substance, and apply it to their crops with great care. It is, undoubtedly, a most energetic and efficient fertilizer, and one which, we are inclined to think, has been allowed to run greatly to waste.

THE ALBANIAN MARSHES.

These marshes are a paradise for ornithologists. Wild fowl of every description rise in clouds on all sides out of shot; while the coots and small cormorants, conscious of safety, scarcely trouble themselves to move at the sound of a gun. Plovers of all kinds whistle around, and down at the sea are flocks of huge grotesque-looking pelicans, with a sprinkling of snow-white egrets. Slowly flapping over the reeds are innumerable marsh harriers; merlins, peregrines, and bright blue hen harriers dash along above, and high up in the air the great Egyptian vultures (seeming pure white as you look up at them from below) soar slowly round, or rise sluggishly from their feast on some carcass at your feet. Eagles are as numerous as hawks in a deer forest in Scotland; five different kinds (I am told—I am no ornithologist myself) are frequently seen. In the woods the great eagle owl (*stryx bubo*) is not uncommon; and there is no lack of four-footed animals—wild boar, roe deer, jackals, foxes and martin cats abound; occasionally a wolf is seen, though they more commonly keep to the hill-sides; and among the high mountains in the interior are bears, red deer and chamois.—*Fraser's Magazine.*

HOW TO MAKE LARD CANDLES.

MESSRS. EDITORS:—Having been the recipient of many favors through the columns of your invaluable publications, I propose, as far as in me lies, to cancel the obligations already incurred, and as the first installment I shall offer a receipt for making hard, durable and clear-burning candles of lard. The manufacture of lard candles is carried on to a considerable extent in some of the western States, particularly Wisconsin, and being monopolized by the few, has proved very lucrative. The following is the receipt in toto. To every 8 lbs. of lard, add one ounce nitric acid; and the manner of making is as follows: Having carefully weighed your lard, place it over a slow fire, or at least merely melt it; then add the acid, and mould the same as tallow, and you have a clear, beautiful candle.

In order to make them resemble bona-fide tallow candles, you have only to add a small proportion of pure beeswax. J. A. ROBINSON.

Belcher, N. Y. *Country Gentleman.*

EXTRACTS AND REPLIES.

HOW SHALL WE SPELL?

The firm of Nourse, Mason & Co., of Boston, have a world-wide reputation for their implements made for turning over and pulverizing the soil. But they have not yet succeeded in instructing the people, *all of them*, how to spell the name by which these implements are to be designated. I find even learned editors vary in this—and dictionary-makers have no standard authority. The witty Dr. Holmes says, there would be the same propriety in spelling the name of the animal that supplies nourishment for our babies, when their mothers fail to afford it, *c-o-u-g-h*, as in spelling the name of this implement *p-l-o-u-g-h*. But every one pronounces the two with the same terminating sound, *cow, plow*. Then why not so spell them? No good reason can be assigned but being led captive by *early prejudices* and *antiquated errors*.

November 16, 1857. REFORMER.

MUCK AS A TOP-DRESSING—MUCK IN BARN-YARDS—MANURES.

Do you think it will pay to spread muck on as a top-dressing for mowing? If so, when is the best time for putting it on, fall or spring? *(a.)*

Do you think it advisable to buy manures to raise crops to pay for a farm, when one has considerable interest money to pay? Or is it best to let the farm pay for itself without any stimulus? *(b.)*

Is cider pomace beneficial to apple trees? *(c.)*

Is it not better to use muck in barn-yards, &c., instead of loam? As I have a great quantity of that article, I wish to know the most profitable way to use it. *(d.)* K. A. C.

Uxbridge, Nov., 1857.

REMARKS.—*(a.)* On sandy loams especially, but on any lands that have been heavily cropped, muck that has been thrown out one or more years, and occasionally worked over to get it fine, affords an excellent top-dressing, even when not mingled with any other substance. We should advise to apply it, if it can be made convenient, as soon as possible, after the grass is cut in July or August; but at any rate, in the fall, in preference to the spring, so that it may have the benefit of the fall and winter rains and frosts in pulverizing and settling it down about the roots.

(b.) Purchasing manure is much like any other merchandising; if you are satisfied that you can increase your profits enough to pay the cost of the manure, then purchase. It will be prudent,

however, to begin in a small way, and where you do experiment, use the manure freely, keeping an exact account of costs, and then you will be able to settle the question for yourself. Try it.

(c.) When pomace is decomposed and mixed with loam or muck, it is said to be a good dressing for apple trees.

(d.) Muck is better than loam for the barn-yard, because it is a much greater absorbent. Fifty loads of good muck, spread in the yard where cattle lie as they usually do in our barn-yards, and where the droppings of the cattle cannot be carried off by rains, will be nearly as valuable as fifty loads of the heap from under the barn window,—provided the muck and droppings be once or twice plowed up or otherwise mixed.

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HOW SHALL I RECLAIM SINKS OR BASINS IN OLD FIELDS?

Can you or any of your correspondents inform me how to reclaim sinks or basins in old fields? The alluvial soil deposited is a compost of clay with every variety of vegetation, and on which grow noxious weeds most luxuriantly, but corn will not come up; a chance stalk that comes up grows off rank for a few weeks, and then dies. I have raised and ridged, manured and limed, but have failed. Should not trouble you, but have a good many acres of land in that condition.

Sparta, 1857. A FARMER.

REMARKS.—We have had no experience with such lands, and must refer the subject to wiser heads.

—

LARGE TURKEYS.

I thought I would let you know what sort of turkeys we have in Worcester. We have one turkey, eighteen months old, which weighs *thirty-two* pounds, and is still growing. We have seven, five months old, whose weight is one hundred and five pounds. If any of your readers have larger ones, I should like to see them.

DAVID R. GATES.

New Worcester, Nov., 1857.

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CREEPER HENS—CRANBERRIES.

Will some of your readers tell me where I can get the old-fashioned creeper hens? Also, where a man can be had competent to prepare the ground and plant one-quarter of an acre of cranberries? A SUBSCRIBER.

West Newton, 1857.

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MAPLE SUGAR.

Londonderry, Vt., has about 1300 inhabitants, and made, last spring, *thirty tons* of maple sugar.

November 16, 1857. S. PIERCE.

REMARKS.—We are glad of it, Mr. Pierce; you are a sensible and industrious people up there, and enjoying most of the sweets of life;—but this latter one we should be glad to enjoy with you.

For the New England Farmer.

AGRICULTURAL REPORTS.

The season for exhibitions having passed by, we may now begin to witness *on paper* what has sprung from these exhibitions. How few there are, who duly weigh the importance of these documents, when prepared. It is not enough to say that such and such a premium was awarded to A. B. or C. D. for his or her best, or second best animal on the field; but the report should so describe the characteristics of the animal or object as to distinguish it from all others, and teach those who are willing to learn, how to grow or produce others of like character. If not, what is gained by the exhibition? The same may be said of crops of every variety. Those who appoint persons to prepare reports, should have regard to the ability of those selected, and those who are selected should never engage in the duty, without a determination to produce something creditable to themselves, and useful for the community.

These observations have been brought to mind by the "introductory remarks," in the annual transactions of one of our County Societies, lately given to the public. While such vigilance is displayed and regarded as is therein contained, there will be little danger of wearing out by repetition. Whoever valued less the products of their orchards, because year after year they had brought forth fruit of the same character and quality?—On the contrary, a certain degree of sameness, gives an increased value to these products.

November 12, 1857.

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REMARKS.—These suggestions are important at this juncture, when so many of our reports are in the course of preparation. Much devolves upon the Secretaries of societies in this particular, and they should insist upon such a report as will elucidate the subject upon which it treats—otherwise the report is not of so much value as the paper upon which it is printed.

For the New England Farmer.

SQUASHES.

I have never known the season when this vegetable was so luxuriant and abundant. I presume the extreme wet of the summer was favorable to their growth. If memory is right, insects, that is, the *striped beetle* and *stinking, black squash bug*—(I speak of them as they are usually called, not having a distinct recollection of Dr. Harris's scientific appellations)—were less numerous than usual. Probably, at the same time the moisture promoted the growth of the vines, it retarded the multiplication of the insects. I have been induced to speak of this vegetable, by the accounts of extraordinary products given us by a friend lately returned from California, who saw *four squashes*, the present season, in San Francisco, the united weight of which was *sixteen hundred pounds*. I have seen in the field of Mr. Merritt, S. Salem, on ten hills, *twenty squashes* weighing *twenty hundred pounds*. On the same farms, I was assured that there has been raised more than

one hundred tons of the marrow squash the present season, on about two acres of ground.

An inquiry has often been made, how is the purity of the squash preserved? I have never met more sensible remarks on this point, than the following, which I quote from a Report on Vegetable Products, about to appear, viz.: *The Transactions of the Essex County Society for* 1857.

"It is a mistake to infer that the seed of the squash is pure, because the squash itself has all the outward characteristics of purity. The crossing of varieties, as in the apple, pear and all our fruits, is not in the pulp, but in the seed; and were the squash vine like our trees, *perennial*, no matter how near other varieties might grow, the fruit would always be constant; but when we plant the seed, be it of squash, apple or pear, then the result of growing it in the vicinity of other varieties, at once shows itself in point of all degrees of purity, though the seed planted may all have come from one squash."

This doctrine may in some manner explain *the vexed question*, which I have often heard answered with great confidence on both sides. Will seeds taken from squashes yield pumpkins? or *vice versa*; will seeds taken from pumpkins yield squashes? I had supposed these vegetables to be as different in their nature, as are the African and the European, in the human family. Nevertheless, I have seen of these, individuals that awakened a strong suspicion of *juxtaposition* of parents before birth. If such erratic adventures happen in the human family, under the obligations of all conventional and moral propriety, much more may they be expected in the vegetable family, that recognizes no such obligations.

Stranger things than these have turned up even in Marblehead—the overflowing fountain of squash intelligence. ESSEX.

Nov. 14, 1857.

NEW BOOKS.

"SORGHO AND IMPHEE, the Chinese and African Sugar. A treatise upon their origin, varieties and culture; their value as a forage crop; and the manufacture of sugar, syrup, alcohol, wines, beer, cider, vinegar, starch and dye-stuffs; with a paper by Leonard May, Esq., of Caffraria, and a description of his patented process for crystalizing the Imphee. By HENRY S. OLCOTT. A. O. MOORE, Agricultural Book Publisher, (late C. M. Saxton & Co.,) N. Y."

Such is a title of this new work on the Chinese Sugar Cane, and the African Sugar Cane, which is also called "Imphee." Mr. Olcott seems to have explored every department of the subject, and perhaps has given all the information in relation to them which it is necessary to know in making further experiments. The book commences with an account of the cane in China, and then goes on with some minuteness through all the stages of planting, culture, harvesting, expressing its juices and obtaining the syrup or sugar. The writer has also introduced the opinions and experiments of many practical men in relation to it. Numerous diagrams and figures illustrate the subject, so that the whole is presented in a clear and comprehensive manner.

The book is printed on large type and good paper, and is a credit to the old agricultural publishing house from whence it is issued. All persons intending to cultivate either of these canes, or who desire to know more about them, may be benefited by a perusal of this work.

"ILLUSTRATED ANNUAL REGISTER, for 1858. With 130 Engravings. By J. J. THOMAS. Luther Tucker & Son, Albany, N. Y."

This is Number Four of the Register and is equal to any of its predecessors. It tells you how to build a cheap farm-house, or a complete country residence, how to protect and feed animals and bees, to build cellar walls and cisterns, about gardens, grapes, orchards, poultry, plowing, and indeed, almost every thing that the farmer ought to know. It costs but 25 cts., and the single article *on Ventilation* is worth more than that to any farmer who will read this. You never will regret it if you purchase it.

MANAGEMENT OF MILCH COWS.

As soon as the grass begins to fail in the fall, milch cows should be fed on warm slops, that they may not get a back set, and kept at night in a warm and comfortable stable. If the farmer prefers using hay, they should have all of it they will eat up clean, and each night and morning a feed of from four to six quarts of shorts, wet with about the same quantity of warm water. Or a more economical way is to feed them twice a day with about half a bushel of nice, clean, cut straw, mixed with about three gallons of warm water. They will then need no hay, and give an abundance of good rich milk. Corn is too heating for milch cows, and has too much of a tendency to fatten.

The stable should be thoroughly cleaned every morning after the cows are turned out, and littered with clean straw. When it is stormy, they should remain in the stable until the middle of the afternoon, when they should be turned out to get water.—*Genesee Farmer.*

LARD AND RESIN FOR TOOLS.

"A penny saved is two-pence earned."

Take about three pounds of lard and one pound of resin. Melt them together in a basin or kettle, and rub over all iron or steel surfaces in danger of being rusted. It can be put on with a brush or piece of cloth, and wherever it is applied it most effectually keeps air and moisture away, and of course prevents rust. When knives and forks, or other household articles, liable to become rusted or spotted, are to be laid away, rub them over with this mixture, and they will come out bright and clean even years afterwards. The coating may be so thin as not to be perceived, and it will still be effectual. Let every one keep a dish of this preparation on hand. As it

does not spoil of itself, it may be kept ready mixed for months or years. *Mem.*—Fresh lard, containing no salt, should be used. Resin is a cheap article, and may be obtained almost anywhere for four to six cents per pound.—*American Agriculturist.*

For the New England Farmer.

SEED OF THE HUBBARD SQUASH.

WILL THE SYRUP OF THE CHINESE SUGAR CANE FERMENT?—BURNING THE SYRUP—SUGAR FROM IT.

MR. EDITOR:—About two years since, I introduced the Hubbard squash to public notice through the columns of your paper. Thereupon letters reached me from many quarters, asking for seed; I satisfied the demand in part with seed that was quite impure, as the parties were informed at the time, but soon found my spare stock exhausted, while still the letters came from the community of live farmers. I was therefore again compelled to resort to your columns, and beg of them to spare me, as on my life I had squeezed out the very last whole seed that could possibly be spared from a stock that had never anticipated such a "run," and was therefore very naturally obliged to "suspend." Last spring, after conning over that famous axiom in political economy, that in a healthy relation between the producer and consumer, the supply will always equal the demand, I resolved that as circumstances had fairly cornered me, and many looked to me as producer of the seed in question, that I would meet the relation fairly, and lay in store a good stock of as pure seed as could be produced. In this effort, I have been successful, and I would, therefore, take the liberty to call the attention of parties whom I was unable to supply, to an advertisement on another page of this paper.

A writer in an agricultural paper inquires whether the syrup obtained from the Chinese sugar cane will remain without fermentation. A year since, I made a small quantity of syrup, and have kept the same loosely corked in a glass bottle under circumstances favorable for fermentation, the warmth of a close room; immediately upon reading the question of the writer, I arose, tested the syrup remaining, and found in it not the slightest indication of fermentation. This syrup was prepared from the pith of the cane, having been reduced about eight-ninths, hardly to the consistency of common molasses.

Writers vary much in their opinions of the quality of the new molasses, rating it all the way from poor West India, to the best syrup in the market. That there is good ground for this difference of opinion, any one will be satisfied by testing the various samples exhibited at our agricultural fairs. At the Essex County Fair, four samples were exhibited, three of which were thicker than common molasses, of a darker color, and *bitter* taste; they had evidently been burnt in the process of manufacture, and no man on his conscience could rank them much higher than the poorest of sweet Cuba molasses. The fourth sample was of about the color of sugar-house molasses, and rather thinner, having been reduced about seven parts in eight; its quality was equal, or nearly equal to that of the best syrup of commerce, with a flavor reminding one of buckwheat cakes. We would advise, therefore, such of our farmer friends as have not as yet finished their experiments, to avoid reducing their sap below the consistency of quite thin molasses, for while this may safely be done by almost any one, to reduce it still more is attended with risk, and calls for the oversight of the experienced sugar-maker. We are told that this variety of the cane can be made to yield but a small proportion of crystalized sugar, as the sugar which it contains is mostly grape sugar, a variety which will not crystalize.

About three weeks since, two hills of cane, one a little more advanced towards ripening than the other, but neither of them having their seed advanced beyond the milk, were given to a friend to experiment with. In a few days, he brought me the result of his experiment, saying that he thought he must have made some mistake, as the product did not seem like molasses. On examination, I found a thick mass, of about the color of honey, too thick to run on the vessel being turned. I found on tasting, that it was nearly pure sugar, as nearly so as the molasses sugar which is sometimes found as a residuum in molasses casks. The peculiarity of the experiment was, that the party knew nothing of sugar-making either in theory or practice. As soon as the sap was expressed, without being strained, it was immediately boiled, and most of the scum removed. No alkali whatever was added, and consequently the sugar has quite an acid taste. From this fortunate accident, I think we may draw two inferences; that to obtain sugar from the Chinese sugar cane, an alkali is not necessary, and that the proportion of sugar in a given quantity of syrup is larger than opinions from learned sources have led us to expect. JAMES J. H. GREGORY.

Marblehead, Mass.

For the New England Farmer.

WOMAN A SLAVE IN HER OWN HOUSE.

The late Gov. Hill, of New Hampshire, in his *Family Visitor*, while remarking on the importance of improving, to the utmost, the character of our butter, gave as a reason for having it nicely prepared, that it had already been a component part of almost all our dishes. But the admixture of butter with farinaceous and other preparations is not the only violation of nature's simplicity. Sugar, molasses, lard, saleratus, eggs, and many more things which might be named, are used in large quantities. The French are said to have no less than 685 dishes of which eggs form a part; and if we have, as yet, not quite so many, it can hardly be said of us that we are not fast coming up with them. But it seldom happens that our food is so simple as to contain but one foreign ingredient—whether eggs, butter or anything else. What were once the plainest, simplest dishes, are often quite compounded.

Time was—and that, too, within our own remembrance—when, in very large portions of our country, no housekeeper, in preparing raised bread, (and very little was used of any other kind,) made use of anything but the needful yeast or leven; not even common salt. Occasionally, it is true, through carelessness or neglect, the fermentation was allowed to proceed too far before the baking process commenced; and the result was a greater or less degree of acidity;

though this seldom happened once in a quarter of a year, and in some families almost never. But "times are altered." Bread, unsalted, would, in most places, be intolerable; nor would it, in many families, be regarded as fit to eat without saleratus. Besides these, our farmers' wives, who have plenty of milk, frequently wet their meal with it; and in making several kinds of bread, they add to all these molasses. I have even, in some places at the South and South-west, seen bread to which a small quantity of flesh meat, finely chopped, had been added. It was called crackley bread.

Just think of this, Mr. Editor, for a moment. Here, in the more common forms of what is justly called the staff of life, are flour, salt, saleratus, molasses and milk, to say nothing of the substance which is usually added as a ferment, or of the acetic acid, which, in order to prepare the way for the saleratus, as well as to have a large loaf, is often developed before the bread is set in the oven! Including the last two, and we have an admixture of no less than seven ingredients, in order to the formation of what was once, and ever ought to have remained, a simple loaf of bread. And thus it seems to be, all the way from our most simple articles up to Mrs. Leslie's mince pies, composed of no less than eighteen ingredients! And then, let me say a word as to the quantity of these foreign ingredients. I can remember—perhaps you can—when from a quarter of a pound to a pound of saleratus or of pearl ash used to suffice for alkali a whole year, in any ordinary New England family. Or, if to this any additions were ever made, it consisted of a little ashes, neatly prepared by burning a few cobs of Indian corn. But now how stands the case? The mother and housekeeper of a well known family of Fitchburg told me a few years ago, in the presence of her husband, and after careful consultation with him, that she made use, in cooking, of no less than twenty-five pounds of saleratus in a year. And yet the family consisted only of ten persons—about one-half of whom were children. This, I admit, is an extreme case; at least I would fain hope so. Yet there are thousands of families of five, six or seven persons, that come nearly half way up to it—that is, they use at least ten or twelve pounds. Indeed, from much observation on this subject in different portions of the United States, I am of opinion that the average amount of this alkali which is used in cookery, can hardly be less than eight pounds. For should it be said that there are many indigent families who cannot afford it, my reply is that the poor are usually among the last to dispense with such a luxury as this. I speak of the past and present, however; for what will be done the coming winter, I do not attempt to predict.

Now, setting aside the fact of its bearing on health—for Dr. Dunglison says, in his Physiology, that "all *made* dishes are more or less rebellious" in the stomach—is it reasonable that woman should be condemned, for life, to a slavery to custom which demands of her that she should expend so much of her "sacred fire" in mixing natural, healthful and—to every unperverted palate—agreeable food with a multitude of foreign substances? For who does not know that it consumes a vast deal of time over and beyond what is needed in the preparation of the plainer viands?

It is not easy to estimate the amount of female time which is consumed in the United States every year, in the manner aforesaid; but it must be enormous. Perhaps we may form an idea of it, by considering for a moment how much time it requires to form cheese—a far less complicated mixture than many others. From the best data I have been able to obtain, it would take a woman a month to make a thousand pounds of cheese—I mean on the supposition that she could employ in this way her whole time. Yet who does not see, at once, that not only is nothing gained in this way, even of gustatory enjoyment, to the unperverted palate, but that the process is accompanied by some waste of nutritious matter and a good deal of vexation and fatigue? Those who have not reflected much on the subject, will, I know, interpose a question here: what should we farmers do with our milk at earlier seasons, if we did not make it into cheese?—a question, however, which, without pointing them to the kingdom of Brazil, and to some other countries, where butter and cheese have never yet been made, might easily be answered.

WM. A. ALCOTT.

Auburndale, Nov. 12th, 1857.

For the New England Farmer.

HEATED ROOMS.

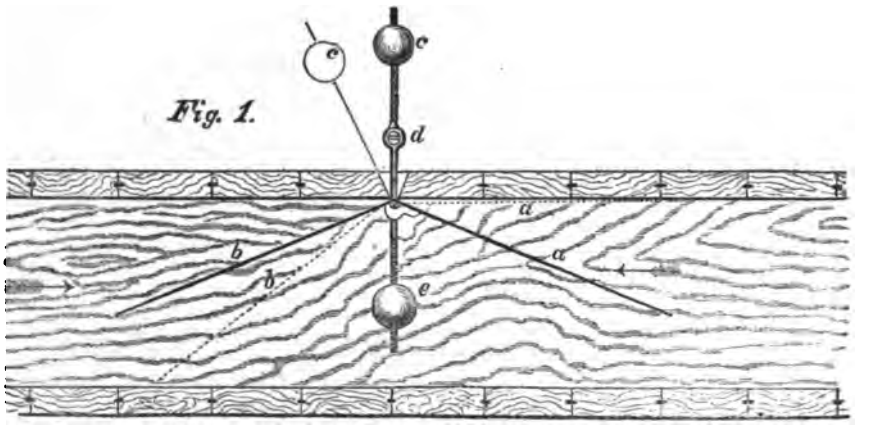
Physiologists, one and all, agree that for health's sake, the breathing of pure air is of the utmost importance; say they, "Whatever makes the air impure, makes the blood impure, and from impurities of the blood originate nearly every disease, hence the sick person taking medicines, and at the same time breathing impure air, labors under the same disadvantage as the man, who, being afflicted with the gout, adopts a medical course of treatment, and at the same time indulges in luxurious living, which was the first and only cause of his disease; in either case, the former course may act as a curative, while the latter is sure to excite disease."

Now in regard to our dwellings, we pursue very much the same course; in winter, we shut up ourselves in small heated rooms in order to keep warm, forgetting that an ordinary man consumes a hogshead of air every hour, and that the stove takes up oxygen, the vital principle of air, twice as fast as a man does; think of it, reader! a hogshead an hour for one person, and judge yourself of how many hogsheads capacity is your room, and how many persons there are to breathe therein. Still you pursue this course, and cough and croup the winter through, and are ready to believe that the human race is fast degenerating, or that the climate has undergone some sad change.

F.

"DIED POOR!"—As if anybody could die rich, and in that act of dying, did not loose the grasp upon title deed and bond, and go away a pauper out of time! No gold, no jewels, no lands or tenements. And yet, men have been buried by charity's hand, who did die rich; died worth a thousand thoughts of beauty, a thousand pleasant memories, a thousand hopes restored.

IMPROVED SUPPLY PIPE FOR HOT AIR FURNACES.

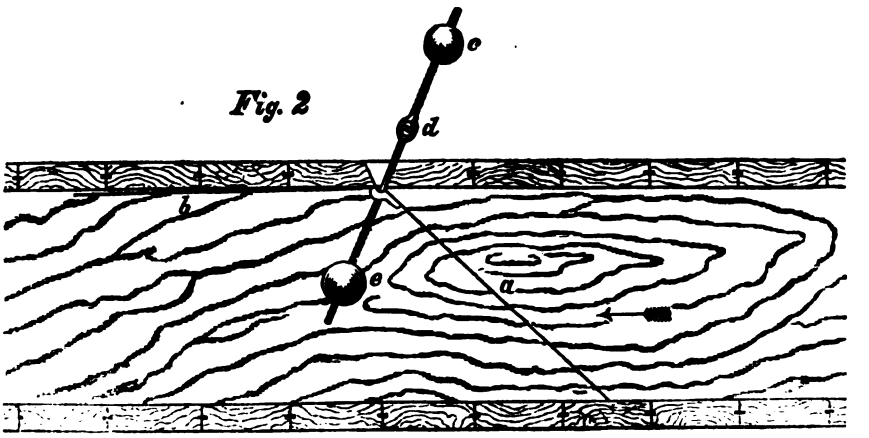


HON. SIMON BROWN:—*Dear Sir*—I send herewith cuts representing an invention by Mr. Samuel L. Hay and myself, by means of which a nearly uniform amount of fresh air is admitted through the supply pipes of furnaces, notwithstanding the tendency to increase of current from external cold, or winds. From the following table may be seen the great difference in speed between light and strong winds; and how irregular would be the supply, if the openings were always the same.

Velocity of the wind. Miles in an hour.	Perpendicular force on 1 square foot, in avoirdupois lbs.		Common appellations of the force of such winds.
1.....	.005	....	Hardly perceptible.
4.....	.079	....	Gentle, pleasant wind.
5.....	.123		
10.....	.492	....	Brisk gale.
15.....	1.107		
20.....	4.429	....	High wind.
25.....	6.027		
50.....	12.300	....	A storm.
80.....	31.490	....	A hurricane.
100.....	49.200		

Persons living in furnace-heated houses have experienced the discomfort from currents of air in cold weather, when the wind was blowing into the mouth of the supply pipe; and also an absence of heat from the furnace because of the wind blowing on an opposite side of the house from the supply pipes, producing a partial vacuum about the mouth of the pipe, causing a current of warm air to pass *out* of the house, and be lost.

The usual way of preventing the air from coming in too freely is to put a sliding valve into the pipe, by which the opening may be diminished; but the wind is fitful, gusts and lulls alternating, and the most careful watchfulness and personal attention cannot govern the supply. Some close these valves, and damp, unwholesome air is taken from the cellar. Others, after experiencing the inconvenience of regulating the current of fresh air through the supply pipe, have had them closed entirely and taken their supply from an opening through the hall floor; but this practice of making bad air by using it over and over again is depressing to the spirits and destructive to health. How often do we hear a person (wishing to be refreshed and "get an appetite,") remark,



"I must go out and breathe the fresh air;" yet how few realize that they can have air almost as fresh and invigorating in their own dwellings, as in the open fields. It sometimes happens from the valve being closed to prevent the warm air from passing out, that heat has accumulated to

such a degree about the furnace, as to set on fire the wood-work. The self-acting regulator I think, will be understood by referring to the accompanying diagrams.

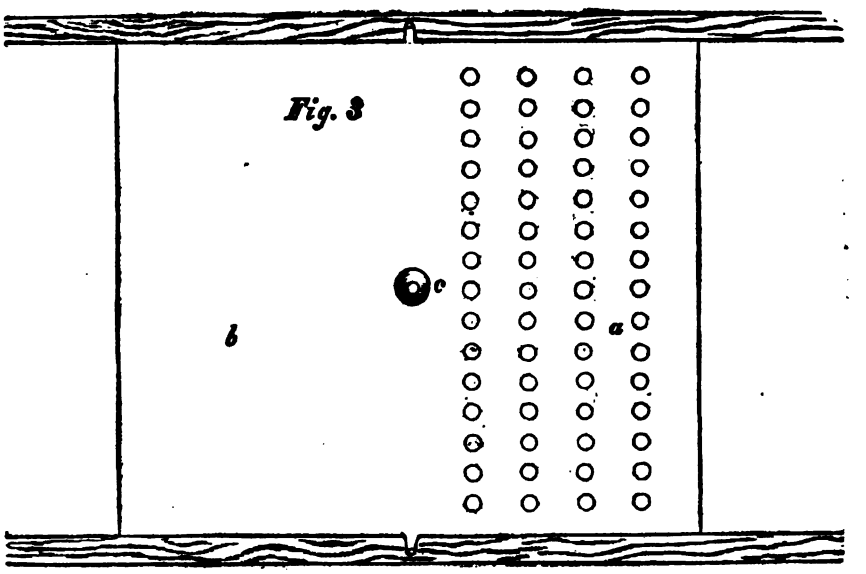
Fig. 1 is a vertical section through the regulator and supply pipe, showing the valve in its position when not affected by currents; the dotted lines representing its position when the inner wing, *b*, is closed by a refluent current, the weight, *e*, still hanging plumb. When the tendency to vacuum about the mouth of the pipe ceases, the current turns inward and the inner wing instantly opens.

Fig. 2 is a similar section, showing the position when the outer or perforated wing, *a*, is closed by the force of the inward current, the weight, *e*, preventing it from closing too freely, and tending to throw it up when the pressure diminishes.

Fig. 3 is a plan with the cover of the supply pipe removed.

The equipoise, *c*, can be adjusted by the joint, *d*, so that either wing can be made to proponderate; or so that if the weight, *e*, is removed and all currents, the regulator will be balanced, and remain in any position it may be placed in its bearings.

Mine has been operating a few weeks only, but sufficient to show that it is a very efficient and useful sentinel. There being a good fire in the



furnace, and the thermometer indicating about 32 degrees outside, the tendency to equilibrium produced a current through the supply pipe of about five miles per hour, (about seven feet per second,) and sufficient to close the outer wing of the regulator, as I had the weight, *e*, adjusted. In colder weather it would be much more, as the contrast between the external and internal air would be greater. In a mild day, when the temperature inside and out is nearly equal, there is hardly any perceptible current.

The regulator may be applied to chimneys, especially where coal is used, to prevent smoke and gas from blowing down, and to produce a uniform draught.

Very respectfully yours,

HENRY B. OSGOOD.

Whitinsville, Worcester Co., Nov. 23, 1857.

☞ A gentleman in Rockingham county, Va., has lost five head of young cattle, and two fine milch cows, within five days, by permitting them to run in the same field where he was feeding his hogs. The hogs ate the stalks of corn, and left them on the ground after chewing. These were taken up by the cattle, eaten, swallowed, and not being digestible, produced an itching all over. They at once commenced rubbing their heads, when their throats swelled, and in a short time, death ensued. So says a Virginia paper.

THE CUNNING OF THE RAVEN.

In the narrative of the Arctic Voyage of Capt. McClure, of the British Navy, is the following story of the two ravens, which became domiciliated on board the Investigator. The raven, it appears, is the only bird that willingly braves a Polar winter, and in the depth of the season he is seen to flit through the cold and sunless atmosphere like an evil spirit, his sullen croak alone breaking the silence of the death-like scene. No one of the crew attempted to shoot the ravens, and they consequently became very bold, as will be seen from the following story:

"Two ravens now established themselves as friends of the family in Mercer Bay, living mainly by what little scraps the men might have thrown away after meal times. The ship's dog, however, looked upon these as his especial perquisites, and exhibited considerable energy in maintaining his rights against the ravens, who nevertheless outwitted him in a way which amused every one. Observing that he appeared quite willing to make a mouthful of their own sable

persons, they used to throw themselves intentionally in his way, just as the mess-tins were being cleaned out on the dirt-heap outside the ship. The dog would immediately run at them, and they would just fly a few yards; the dog then made another run, and again they would appear to escape him but by an inch, and so on, until they had tempted and provoked him to the shore, a considerable distance off. Then the ravens would make a direct flight for the ship, and had generally done good execution before the mortified-looking dog detected the imposition that had been practised upon him, and rushed back again."

AGRICULTURE A STUDY FOR OUR COMMON SCHOOLS.

That a knowledge of Agricultural Chemistry is important to the tiller of the soil, that he may prosecute his calling understandingly and with the highest success, is too plain to admit of argument, but whether it may be profitably and successfully taught in our common schools, and whether it should be a branch of study in them, is an inquiry that may startle some of the friends of these good old institutions, who would look upon such a proposal as an innovation upon those time-honored studies of Reading, Spelling, Writing, Arithmetic, Grammar and Geography. As a general rule, we do not approve of the introduction of the higher branches into our district schools, believing that it would have a tendency to divert attention from those primary studies which appropriately belong to them. But when we consider that so large a population gain all their education in these schools, and that so many of the pupils become tillers of the soil, shall not a brief space be allotted for this instruction in the principles of their future calling? The disinclination which is felt among the farmers to reading articles in our journals which relate to agricultural chemistry arises from their ignorance of its first principles. If they do not understand the terms and laws of the science, reasoning founded upon them will always appear loose and confused, and it is only by implanting them early in the mind with the other rudiments of knowledge, that they may become familiar as the alphabet, and may be ready for use when needed.

It is true that our teachers as a class are now preparing to instruct in this department, and unacquainted as they are with it, they cannot bring forward those ready and common illustrations which not only assist the pupil, but secure his attention, and interest him in the study. Though teachers may not be required to pass an examination in this branch, yet let it be known that in winter schools, in our rural districts at least, it may be desired as a branch of study, and the supply will answer to the demand; teachers well qualified in other respects, will not hesitate to devote sufficient time to acquire a knowledge of this study. The greater ease of managing a school kept busy by some interesting study will fully compensate for all the extra trouble.

Happily we have not to wait for the preparation of a book adapted to the capacity of this class of scholars, and at the same time strictly correct and complete in its scientific detail. The "*Catechism of Agricultural Chemistry and Geology*," by the late Prof. Johnston, of Edinburgh, was dedicated to "the school-masters and teachers of Great Britain and Ireland," and has been extensively introduced into the schools of the United Kingdom. To the late Prof. Norton, of Yale College, we are indebted for an American edition, with an introduction prepared by him. The Superintendent of common schools in the State of New York recommends it highly for the use in all their schools. From long acquaintance with the work and from the interest we know is excited by its study, we most cordially advise all to form classes in it and and give it a trial, being well assured of the result. As it is a small book, the cost is trifling, and the time required of little moment, but as the author here exhibits the happy faculty both of condensing and symplifying without weakening or detracting from the subject, the treatise is very complete. The first three questions and answers will give an idea of the whole.

Q.—What is Agriculture.

A.—Agriculture is the art of cultivating the soil.

Q.—What is the object of the farmer in cultivating the soil.

A.—The object of the farmer in cultivating the soil is to raise the largest crops, at the smallest cost, and with the least injury to the land.

Q.—What ought the farmer especially to know, in order that he may attain this object?

A.—The farmer ought especially to know the nature of the crops he raises, of the land on which they grow, and of the manures which he applies to the land.

Crops, soils, manures, the rearing and feeding of animals, and the management of the dairy, make up the volume. Teachers who would prepare themselves for instruction in it, would find the more extended treatises by the same author, viz., "Johnston's Elements" and "Johnston's Lectures," most valuable aids, as also "Norton's Elements of Scientific Agriculture," a prize essay of the New York State Agricultural Society.—*Homestead.*

For the New England Farmer.

RURAL ECONOMY.

MR. EDITOR:—The day is rainy, and I have searched, as I always do on rainy days, for some essay or dissertation upon subjects connected with agriculture—some article giving the fundamental principles of action or of operation. I have looked through one volume of Skinner's *Old American Farmer*, and have found some interesting things—but I fail among them all, and among all other books and publications which I have looked through again and again, with the same object in view, to find any essay or dissertation treating agriculture as Foster treats decision of character, analyzing it, and enunciating its component parts, and presenting facts which one may study without weariness, and still learn something new; study which will teach him how one operation depends upon another in the great system of husbandry and of Rural Economy. There is, sir, a Rural Economy as well as a political Economy.

How is it to be analyzed?

How is it to be elucidated?

Would it be better practised if divided into distinct systems?

Its practice now presents a confused and jumbled mass of operations, without definite aims and endeavors. Is it the want of capital which makes farming so mixed and indefinite in its aims and ends?

Is it the possession of this which makes English farmers so successful?

Can you not then point to some carefully studied and written essay upon this important subject? or induce some man, like Josiah Quincy, senior, or the late S. W. Pomeroy, or the late Timothy Pickering, or the present Hon. J. W. Proctor, or others, to make the principles of Rural Economy more plain, and to tell us what is necessary in order that agriculture may be prosecuted as naturally and regularly, and with as much success as the operations of the mechanical world—some one who will show upon what great principles the Flemish husbandry is so successful, and the English tenant farmer pays his immense rents from year to year without even the idea of failure once entering his brain?

Will you not give attention to this matter, and gratify your anxious readers?

A CONSTANT READER AND SUBSCRIBER,
AND READER AND SUBSCRIBER TO EVERY OTHER JOURNAL.

November, 1857.

REMARKS.—We hope some person of ability and leisure will gratify our friend, and enlighten the waiting thousands who need the information asked for.

For the New England Farmer.

PATENT OFFICE REPORT FOR 1856.

MR. EDITOR:—At no time in the history of this country has there been so much scientific inquiry and interest manifested in agriculture and its kindred operations, as at the present time. I need not produce arguments to prove this—the most obtuse observer cannot but be convinced of it, from what he may witness constantly transpiring about him, whether he is actually engaged in carrying on a farm or engaged in other pursuits. The improvements in farm implements, the application of manures, rotation of crops, &c., &c., from year to year, all bear witness to this great fact. No less, also, is the fact manifested in the various publications, treatises, &c., which team from the press, relating to agriculture in its different departments; and while there is none the less science or talent displayed, they are more practical, more within the comprehension of the ordinary farming mind; and, therefore, these publications are more sought after and read. Compare the state of things in this respect, at the present day, with that of only ten, or even five years ago, and how striking the contrast! While at the former period, book-farming, so called, was looked upon with suspicion by most farmers, now nearly all, except the "Simon pure old fogy," is willing to acknowledge himself more or less a book farmer; and the man with only his single half acre, or acre farm, up to the thousand acre farmer, takes his agricultural paper, and considers his fireside incomplete without a few books relating to this most interesting branch of human industry, to refresh his mind and enlarge his ideas, as well as to instruct his household generally. At the same time, many of the latter have their tables loaded down with domestic and foreign weekly and monthly publications, and a library of books relating to agriculture in all its various departments, which would put to shame many a man in the learned professions. And all this brought about in comparatively a very few years, by the march of progress.

I have been led to these thoughts by looking over the last report of the Agricultural Department of the Patent Office, lately issued, a book of 536 pages and fifty plates. The plates, typography, &c., are among the best ever issued from the office. That of 1855 was far ahead of anything of the kind before; and this of 1856 is superior to that. It would take up too much of your valuable paper to name the different subjects treated of in this volume; they are those, however, most interesting to the great body of farmers, and the chief merit of all is, they are short, practical and to the point, upon a great variety of topics. I would go ten miles to see a bed of Peabody's New Hautbois Strawberry, as represented at Plate III. My desire is, in calling the attention of the readers of the *New England Farmer* to this volume, that they may secure a copy, feeling assured they will find much in it of great interest; and its suggestions, if followed, may be the basis of increasing the profits of the farm, and of rendering some of its operations more intelligent than heretofore.

From long and careful observation, I am well satisfied, all things being equal, the more *mind* that enters into the operations of the farm, the greater the profit. It is not every book or report written for the especial benefit of the farmer, that accomplishes its purpose. Either from the obscure manner in which it is written, its technicalities or some other equally great defects, such labors bear no fruit. None of these faults will be found in this book. As a model article, take for instance that written by the senior editor of the *Farmer*, under the head of FERTILIZERS, "*On the Value and Uses of Swamp Muck.*" Everything relating to the subject is plainly stated in simple, beautiful language, and directly to the point. "A fool need not err therein." That by Prof. Henry, "*Meteorology in its Connection with Agriculture*," presents this science to the ordinary farming mind in language so simple, clear and interesting, as to command attention; and if carefully studied by the farmer, he will be enabled to see new beauties in the operations of nature, such as he never thought of before. So in regard to the other subjects treated of in this report.

Write to some member of Congress and get a copy while you may, and see if these things be so.

NORFOLK.

King Oak Hill, 1857.

REMARKS.—We would express our thanks to "Norfolk" for the expression of his favorable opinion on the article "*On the Value and Uses of Swamp Muck.*" That article was prepared by us expressly for the pages of the Patent Office Report. It was written in a plain, popular style, and every word and scientific term not in common use among our farmers, was studiously avoided

wherever it could be done without impairing the sense. The article was also divided into proper paragraphs, and each subject placed under its appropriate head, so that any definite part of it might be turned to and perused without going through the whole. These headings were as follows:

1. Where muck is mostly found.
2. Of what muck is composed, and how deposited.
3. Of the different qualities of muck.
4. How muck may be best obtained.
5. Some of the modes by which muck may be prepared for use.
6. Muck composted with barn manures.
7. Of muck composted with prepared bones.
8. Of muck composted with ashes.
9. Of muck composted with lime.
10. A compost of *salt*, lime and muck.
11. On what land muck is beneficial.
12. Quantity of muck per acre.
13. How and where muck should be applied.
14. Effects of muck on the soil.
15. Muck as an absorbent and deodorizer.

These, together with some collateral points, were discussed in the briefest and clearest manner consistent with the short time in which we were to present it. As it is presented now, however, it is a very different thing. Remarks which we thought due to the subject, if it were treated at all, have been omitted; all the headings, which were as so many marginal notes, have been suppressed, and with them two or three tables, showing the comparative value of the substance usually composted with muck. The whole article, also, has been crowded into a dense, uninviting mass, while others in the volume are unnecessarily expanded. We make no profession in writing to anything more than a plain, simple expression of our thoughts; but in the arrangement of matter when written, and in an appreciation of the popular wants, we will yield to few only, because a thorough training in a printing house, followed by a life of editorial duties and a watchfulness that has never tired, has given us means of judging which comparatively few possess.

A TIGHT PLACE.

When Col. Lee, of New York, was collecting subscriptions for the equestrian bronze statue of Washington, now standing a monument of patriotism and art at the corner of Union Park, he had occasion to visit an old curmudgeon in the neighborhood, and pulling out his subscription paper, requested him to add his name to the list. But old Lucre declined respectfully.

"I do not see," he said, "what benefit this statue will be to me; and five hundred dollars is a great deal of money to pay for the gratification of other people."

"Benefit to you?" replied the Colonel. "Why, sir, it will benefit you more than anybody else. This statue can be seen from every window of your house; it will be an ornament, and add dignity to the whole neighborhood, and it will perpetually remind you of the Father of his country—the immortal Washington!"

"Ah, Colonel," answered old Lucre, "I do not require a statue to remind me of him, for I always carry Washington here;" and he placed his hand on his heart.

"Then let me tell you," replied Col. Lee, "if that is so, all I have to say is, that you have got Washington in a very tight place!"

For the New England Farmer.

HARVESTING POP CORN.

MR. EDITOR:—Some months ago I penned a few remarks for the *Farmer*, in regard to the cultivation and uses of the common "pop-corn." I stated that it might be harvested as soon as it was out of the milk, and before the husks and leaves became dry, thereby adding much to the value of the *stover*, as food for cattle. A gentleman of Lexington, I think it was, wrote a reply, taking the ground that this, as well as all other kinds of corn, could not be perfect as cereal grain, unless it be allowed to ripen thoroughly on the stalk. My experience had been different; but I determined to try an experiment the present season that would leave no possible doubt in my own mind, on the subject. Accordingly, I harvested a portion of my crop the present season, (and, by the way, I only cultivate a small garden,) while the stalks and leaves were yet green, and the kernels only in the *sere*. Another portion I harvested when the ears had become thoroughly ripe, and the husks dry. Both kinds are now in fine popping order, and I must say that I find no perceptible difference in them. The early harvested portion is certainly not inferior to the other; while the value of its stover is at least double that of the later harvested portion. I apprehend that our New England farmers do not, as a general thing, appreciate the value of the corn crop as a cattle feeder, nor take proper pains to harvest it so as to obtain the highest value from the stover. A fair crop of corn, if harvested while the stalks are yet green, is fully equal to a ton of hay per acre, besides the value of the grain itself.

The pop-corn, besides its value as food for children, and its peculiar adaptation to the fattening of fowls, (on account of its larger proportion of oleaginous matter,) is an excellent cattle-feeder. The stalks have as large a portion, apparently, of saccharine matter as any other variety; and being small, cattle will eat them up nearly clean. What they lack in size may be compensated by the number of stalks in the hill, or by the nearness of the hill.

It may be worth a few moments' time to calculate the value of an acre of pop-corn, at the prices which our city residents pay for the article when fitted for their palates—that is, when parched and on sale by the grocers and candy men. Call it four cents a quart, and call a quart the product of a middle-sized ear. The corn may be planted, say three feet apart one way, by

eighteen inches the other. Allow, if you please, eight ears to the hill; which is not equal to the average of mine. Fifty hills to the square rod would be about eight thousand hills, or sixty-four thousand ears to the acre. This is only *two thousand five hundred and sixty dollars* per acre, for those to pay who eat the corn! Allowing that I have made the crop too large, and the price too high, take away half the amount, if you please, for every contingency which may be thought of, and we still have twelve hundred and eighty dollars, which the consumers pay for the product of an acre of ground; and who among them pretends to call pop-corn dear eating?

I do not make these remarks in the hope or expectation that farmers will go into the cultivation of pop-corn to the neglect of other crops; but I do think that, as a highly palatable, simple, and nutritious article of diet, especially for children, this corn is not sufficiently appreciated; and I take this mode of urging greater attention to the subject. E. C. P.

Somerville.

For the New England Farmer.

EXHIBITION OF MOWERS AND REAPERS,

BY THE U. S. AGRICULTURAL SOCIETY, AT SYRACUSE, N. Y., JULY, 1857.

BY A YANKEE DOODLE, WHO SAW IT.

We have come to Syracuse,
Mid this heated weather,
For to see the mowers mow,
And Reapers reap, together;
And if old Sol's burning glass
Don't in our own fat fry us,
We'll give our judgment on the work
Without a hair's breadth bias.
So bring your reapers on the ground,
And bring your mowers, too, Sir,
And let us Yankees show the world
A Yankee doodle *do*, Sir!

Here they come—creation! how
They sweep about the field, Sir—
Time may as well hang up his scythe,
And to their prowess yield, Sir;
Though he "cuts all, both great and small,"
And once his scythe went through, Sir,
A harvest worthy of his arm—
The field of Waterloo, Sir.
But no Yankee mower swept
Among that famous fight, Sir;
For if it had, I *rayther guess*,
You'd have seen a *different sight*, Sir!

Now, they've *processed* around the track—
The cannon roared its duty;
There you see the bright array,
The chivalry and beauty;
Farmer Wilder, from the stand—
A Gov'ner at each shoulder—
Speaks a speech that takes by storm
The heart of each beholder.
"And," says he, "bring right along
Your reapers and your mowers,
And we'll show how mighty quick
We can do up the *chores*."

Gov'ner King, he up and made
A short, but pithy talk, Sir—
And Gov'nor Morehead toed the mark
Made by the *union chalk*, Sir.
And then the people all hurrahed,
And clapped with hearty smackers,
Until you'd thought a fire had caught
Ten thousand India Crackers.
Which went to show, whatever else
In mowing might be done, Sir,
They couldn't cut the chain that binds
Our thirty States and one, Sir!

Marshal Taylor, on his horse,
With flowing yellow sash on,
Said "Forward, march!" and on they went
In military fashion:
And, as along the country road
The big machines did rattle,
One would have thought an army grand
Was going out to battle.
And so they were—but not to fight
And mash each other's face, Sir,
But, as the lawyers say, "submit
An amicable case," Sir.

And when they got upon the field,
As well you may suppose, sir,
The way those cutters clipped the grass
A *caution was to Mose*, Sir!
And as they *streaked* it o'er the land,
And set the odder free, Sir,
Old Time stood by with gloomy brow,
And sighed, "You've conquered me, Sir!"
So bring your mowers on the ground,
And bring your reapers, too, Sir,
And show the universal world,
What Yankee pluck can do, Sir!

Time hung his scythe upon a tree—
"Good-bye to you—you're *done*, Sir,
The poorest mower on the ground
The wreath from you hath won, Sir!
Henceforth I'll mow—as mow I must,
Among the grasses green, Sir,
And cut down all, both great and small,
With the best prize machine, Sir!"
Then, Yankee doodle keep it up,
The best invention going
Is that which beats the Reaper old
In reaping and in mowing.

HOW PEOPLE TAKE COLD.

The time for taking cold is after your exercise; the place is in your own house, or office, or counting-room.

It is not the act of exercise which gives the cold, but it is the getting cool too quick after exercising. For example: you walk very fast to go to the railroad station, or to the ferry, or to catch an omnibus, or to make time for an appointment; your mind being ahead of you, the body makes an over effort to keep up with it; and when you get to the desired spot you raise your hat and find yourself in a perspiration. You take a seat, and feeling quite comfortable as to temperature, you begin to talk with a friend, or to read a paper; and, before you are aware of it, you experience a sensation of chillness, and the thing is done.

You look around to see where the cold comes from, and find a window open near you, or a door, or that you have taken a seat at the forward part of the car, and, as it is moving against the wind, a strong draft is made through the crevices. Or, it may be, you meet a friend at the street corner, who wanted a loan, and was quite complimentary, almost loving; you did not like to be rude in the delivery of a two-lettered monosyllable, and while you were trying to be truthful, polite and

safe, all at the same time, on comes the chilly feeling from a raw wind at the street corner, or the slush of mud and water in which, for the first time, you notice yourself standing.

After any kind of exercise, do not stand a moment at a street corner for anybody or anything; nor at an open door or window. When you have been exercising in any way whatever, winter or summer, go home at once, or to some sheltered place; and, however warm the room may seem to be, do not at once pull off your hat and cloak, but wait some five minutes or more, and lay aside one at a time; thus acting, a cold is impossible. Notice a moment: when you return from a brisk walk and enter a warm room, raise your hat, and the forehead will be moist; let the hat remain a few moments and feel the forehead again, and it will be dry, showing that the room is actually cooler than your body, and that, with your outdoor clothing on, you have cooled off full soon.

Among the severest colds that I have known men to take, were those resulting from sitting down to a meal in a cool room after a walk; or being engaged in writing, and having let the fire go out, their first admonition of it was that creeping chillness, which is the forerunner of a severe cold. Persons have often lost their lives by writing or remaining in a room where there was no fire, although the weather outside was rather uncomfortable. Sleeping in rooms long unused, has destroyed the life of many a visitor and friend; our splendid parlors and our nice "spare rooms," help to enrich many a doctor. The cold sepulchral parlors of New York, from May till November, bring diseases, not only to visitors, but to the visited; for, coming from domestic occupations, or from the hurry of dressing, the heat of the body is higher than usual, and having no cloak or hat on in going to meet a visitor, and having in addition but little vitality, in consequence of the very sedentary nature of town life, there is very little capability of resistance, and a chill and cold is the result.—*Hall's Journal of Health.*

STORIES OF BIRDS.

To begin with the kingfisher. This bird has been well styled the only one which, in our islands, decks itself with a plumage of tropical richness and lustre. How rarely is it seen!—how shy of observation!—and how dazzlingly splendid when its green and crimson metallic *scales*, as one may call them, reflect the rays of the sun! I have seen this bird in an almost domesticated state—that is, I have seen it in a certain pleasure-ground remain on some old timber hanging over water, until we had come so near as to have a perfect view. It—or rather they, for there were several of them—ran about briskly while we approached, and then only seemed to retire a short way among the water-weeds. I am reminded here of an anecdote for which I can vouch, and which shows that the kingfisher has a remarkable tenacity of life.

One of these birds flew, one day, in some unaccountable way, into the open windows of a country-seat in Berkshire. It entered a drawing-room by one window, and dashed at another which happened to be shut. Of course it fell struggling to the ground, stunned, if not killed, by the shock. The ladies, who alone were present, summoned the butler to put the poor creature out of pain. This he did effectually, by "wringing its neck" in the ordinary way; and depositing it on a table, in order that its beauty might be admired by the whole family. Here it lay for some time, to all appearance quite dead; but at length some slight motion was perceived about its head—the head evidently was moving a little; and by and by this said head began slowly to turn round and round, which gyration was performed some five or six times, answering no doubt to the "wrings" inflicted by the ruthless hand of the butler aforesaid, until at last it seemed to have recovered its natural position. Thus it lay with open and glittering eyes for a short space; and then, as if instinct with new life, it made a sudden effort, flapped its wings, flew to the open window, and disappeared!

This recalls a somewhat similar instance of a partridge. This bird—an old cock I warrant him—was knocked over in the usual way in "stubbles and turnips." He was picked up while yet struggling, and his head severely knocked on the stock of a gun by one of the party. He was then "hung by the neck" with some others in a net by a leather strap contrived for the purpose. In this durance the poor animal remained during the rest of the day and the following night, being hung up with the bag in the gun-room. On the following day, when the keeper proceeded to hand over his prey to the cook, this bird was shaken out of his collar upon the table; whereupon he immediately got on his legs, looked about him, flew straight at the window, through a pane of which he broke his way, and escaped!

I will here mention an anecdote of another kind connected with birds, which has always struck me as most extraordinary.

I had obtained from the nest three young bullfinches, and had had them several days in perfect apparent health: they could feed alone, and seemed quite strong. One morning they seemed, in the very act of awaking, to be seized together with some sudden fit. They fell from the perches into the sand at the bottom of the cage, beating it about most violently with their wings, rolling over and over, and exhibiting the same appearance as wounded birds generally do. After perhaps two minutes of these extraordinary gambols, they all alike seemed to get rid of the exciting cause, whatever it was; they ceased to struggle; sat up languidly on their tails, steadying their panting bodies with their wings; and at length quite recovered their usual health. About ten days after, the same *simultaneous* seizure was repeated; they all fell down again, and struggled in the same way; but this time they died—*together*, of course.

I have often asked myself the question, what could have been the mysterious tie of sympathy between those singular birds? Had they each in turn died of some fit, it would have been a common death of the bullfinch tribe; but that the fit should have seized them *all* at the same moment, in the first instance harmless, and in the next with fatal results, remains a mystery to me to this day.

Talking of bullfinches and their fits, I may observe that apoplexy, their great enemy, may be averted for a long time, if not entirely, by avoiding the alderman's snare,—I mean, oleaginous feeding. Let them have canary-seed as a staple,

and an ample supply of *green food*—chickweed, groundsel, salids of all sorts, and fruit in the season; and *plethora* may be kept in check effectually. I would allow a grain or two of hemp-seed now and then from the master's or mistress's own fingers, but only seldom, and as rewards for good behavior.

EXTRACTS AND REPLIES.

A CURIOUS APPLE TREE.

In the garden of J. C. STEBBINS, of Charlestown, N. H., stands an apple tree that was grafted some fifteen years since, near the ground. It has now a straight, handsome body, some six or eight inches in diameter. It bears abundantly, but what is singular, a part of the apples are yellow Bellflowers, and a part English russetts.

All over the tree may be seen bellflowers and russetts growing upon the same limbs, often within a few inches of each other. I can account for the phenomenon in no other way, than by supposing the tree to have been cleft-grafted with two scions, one a bellflower and the other a russett. The tree being small, the scions came in contact and grew together. From this union the top is formed, and, as I stated above, bears two kinds of fruit upon the same branches. Should any doubt the story, the tree stands there, "a living witness!" J. R. W.

Springfield, Vt., Nov. 19, 1857.

GETTING TREES BY CUTTINGS.

I noticed in the *Farmer* of October 31, an "Inquiry about Fruit Trees," by an "Honest Farmer Boy," the substance of which was, "does it make any difference whether apple and pear cuttings, be planted in October or November, to procure fruit in five or six years?" In my opinion, it makes no difference in which month they are planted, or whether they are planted at all. I have been more or less engaged in propagating fruit and fruit-trees for several years past, and have tried many experiments with cuttings, without success. If pear and apple trees could be propagated by cuttings, nursery-men would have found it out ere this, and adopted the plan. Yet they raise their trees from seeds or by root-grafting. J. R. W.

THE CROW.

Most farmers hate the crow, and give as a reason that he pulls up the young corn, and that is the only substantial reason that can be given. For twenty years of my life, as a farmer, I think I never had a peck of corn destroyed by the crow. We may let our fields remain unprotected from our cattle and they will destroy our crops,—place a good fence about them and they are safe. I have always found it as easy to protect my fields of corn from the crow as from my cattle, by putting twine around the field. It is but a few days that he does us any damage at all, but he is always devouring that which will prevent disease. I think there is a generation wiser than this to come, that will impose a fine on any person that destroys the crow. My boys obtained a young crow last June which we completely tamed, and found that he would eat almost anything rather than corn in its dry state; and who ever saw a crow destroying our corn in the fall? My corn was where they could get what they pleased, but seldom if ever did they disturb it.

There is a singular circumstance respecting our crow; he seldom, if ever, left home unless some of the family went with him; but about the first of November, he suddenly disappeared; we supposed he was dead, killed by some evil-disposed person; but on Thursday, May 7, the first that met my eye in the morning on going to my barn was our crow, sitting on one of my maple trees. He appeared as glad to see me as I was to see him, rather shy at first, but in less than twenty-four hours the boys had their hands on him; on Saturday he went with us to the field and saw us plant corn, and soon became as tame as he was before he left. He was gone over six months, and then returned. Does the crow go South in cold weather? A SUBSCRIBER.

Ware, Mass.

REMARKS.—This communication was mislaid with some other papers, or it would have been published before. The crow is not, like the swallow, a migrating bird, but has its own locality where it probably passes its life. The crow, however has great power of wing, and often travels considerable distances in search of food, probably fifty miles at once in order to reach the seashore, or the margin of large rivers.

CARROTS.

The best crops of this vegetable I have seen the present season were grown by Daniel Buxton, Jr., of South Danvers, 16 tons, on a lot of 75 rods of land; and 15¼ tons on one-half an acre, by E. Brown, of Marblehead. Most of the crops in Essex county have fallen short of expectation nearly *one-third*. P.

November 19, 1857.

STOCKS FOR DWARF PEARS.

Is it generally known that the *Amelonchier Canadensis* is a good stock for dwarfing the pear? I know that it is so; and was induced to try it by reading Emerson's report on Woody Plants of Massachusetts, page 443. It is the shad bush or planting bush of the aborigines. S. T., JR.

Swampscott, Mass.

A FINE APPLE.

The large and very beautiful apple sent by Mr. CHARLES NEWCOMB, of Quincy, is new to us; it does not come up to the term of *best*, in flavor, but is far better than a great many varieties cultivated.

LAWTON BLACKBERRY.

J. A. F., of North Clarendon, Vt., will probably obtain the information he wants by consulting our advertising columns next March or April.

PROFITS OF SHEEP.

Will "P. J.," Randolph, Vermont, please send his whole address to A. Littlefield, Boston, who desires some communication with him on the subject?

CORN AMONG POTATOES.

The writer last season planted a plot of potatoes about the first of April, which grew finely, and received their final hoeing about the first of June. At this date my little son, unknown to me, went and planted a few hills of corn between the hills of potatoes. The potatoes were in drills some eighteen inches apart. At the time of digging, 25th of July, the corn was up some three feet high, and if there had been a sufficient amount of it, I should have left it to ripen. But wishing to use the land for a late crop of turnips, I cut the corn for fodder. But the random planting of the lad went far to convince me of a fact which I hope to profit by, and now communicate for the benefit of your subscribers, *i. e.*, that a crop of some quick growing corn —say the King Philip—may be grown after an early crop of potatoes, if planted immediately after the last hoeing of the potatoes, or about the first of June; care being taken at the digging not to molest the roots of the corn.

WM. J. PETTEE.

Lakeville, Conn., Dec. 3, 1857.

—

VERMIN ON CALVES AND SHEEP.

Can you or any of your correspondents inform me what is the best way to kill lice on calves and ticks on sheep, and oblige a farmer?

Tyson Furnace, 1857. A. H. HOSLEY.

REMARKS.—A careful application of some soft grease or oil, twice a week, continued two or three weeks, will generally destroy these vermin. It should be rubbed in with the hand, so as to oil the hair or wool. A little yellow snuff may be sprinkled in after the oil is applied. Clean wood ashes is also often used, but all such applications must be used with care. Preparations of mercury, such as unguentum, are used in desperate cases, but they are dangerous remedies, and their nature ought to be well understood by those who resort to them.

"J. B. N." communicates to us the following mode, and it is one we think quite well of, provided the animal is kept warm after the washing is done: "Take one-third soap and two-thirds water, and wash the animal all over at three different times, and it will kill all the lice."

—

VIEWING FARMS ENTIRE.

After much attention to the subject, I am confirmed in the belief that as much, or more, benefit may accrue to the farmer from such views, discreetly conducted by competent agents or committees, as in any other manner. I am not unmindful that different notions are entertained by some. I find in the report of the learned Secretary, upon the Agriculture of Massachusetts, in 1856, page 441, the following sentence: "from motives of delicacy gentlemen were frequently reluctant to communicate fully, when informed that facts so collected were intended for publication." I think the gentleman who penned this sentence was misled in his inferences, from the facts before him; for I have good reason to believe that many, very many of those who communicate to him facts, were as anxious that such facts should be made known to the public as he was to have them; and that what he construed as "motives of delicacy," were neither more nor less than a false, pride or morbid sensitiveness. If there be any such, let them pass by, and call on those who have no such delicate misgivings.

ARATOR.

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HOW TO CURE FOUL IN THE FOOT.

Mr. CHARLES ROBINSON, of Lexington, informs us that the application of a little oil of spike, *oleum nardenien*, about a tea-spoonful once a day to each foot, will effect a cure in one week. The claw should be opened, cleaned a little, and the oil turned in.

—

SHEEP HUSBANDRY.

I was recently made acquainted with a gentleman from Germany, who was desirious of renting a farm to introduce the keeping of sheep. I directed his attention to the county of Franklin, or the region thereabouts, as the best locality for this purpose in Massachusetts. There may be some farms in the hill towns of Worcester where sheep can be kept advantageously—but as a general thing, sheep flourish best where there are high hills, covered with a good coating of grass, and where lands can be had at a price not exceeding *twenty-five dollars* the acre. I have no doubt that a few sheep would be serviceable, on every considerable farm, even in the eastern counties of the State, but they will be kept to better advantage to the proprietor, where lands are cheaper, and dogs are not so plenty as they are in

Dec., 1857. MIDDLESEX AND ESSEX.

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BLACK POLAND FOWLS.

Will some of your readers tell me where I can get pure breed Black Poland Fowls, the most useful as well as the most ornamental of all birds, and oblige AN OLD SUBSCRIBER.

Northfield, Mass., Nov., 1857.

—

GARGET IN COWS.

Can you inform me of a cure for gargety cows?

REMARKS.—A few drops of the tinture of *Aconite*, given upon a little wet corn meal, has proved effectual in many cases.

—

A FINE HOG.

Mr. JOHN G. SOLGER, of Plymouth, Vt., has just slaughtered a pig, eight months and four days old, which weighed 356 lbs., dressed. A.

For the New England Farmer.

GIRLS CAN TAKE CARE OF THEMSELVES.

MR. EDITOR:—I suspect "A Farmer's Son," in your paper of this date, (Vol. 12, No. 47,) is more *theoretical* than *practical*, in his sympathy for the girls of the household. The truth is, girls can take care of themselves, quite as well as boys, if they are only made to feel, when young, that they have got to do so. There are many honorable ways in which they can provide the means of living;—and if rightly directed by their moth-

ers, they will early have the energy and ability to take care of themselves. And if they manifest this, they will soon meet with help-mates, who will cheerfully lend all necessary aid. This bringing up girls to remain *a fixture* upon the homestead, is not the thing. It is neither agreeable to them, nor useful to the community; it is perverting the order of nature; and a misuse of the better part of creation.

Your young friend seems to think that the farm at home must be managed as it has been, in years gone by, yielding just enough to make both ends meet, with careful industry and economy. Let me tell him to have regard to the story of the man who left his treasure to his sons, buried within twelve inches of the surface, without specifying particularly the place where, and as soon as he was decently laid away under the sod, they started on a hunt to find the hidden treasure; and by the time they had been thoroughly over the entire surface, they began to learn the *mystery of the deposit*, and found no obstacle to *the removal of it*. The truth is, "where there is will, there is a way;" and girls will get along well enough, if they will but avoid being *misled* and *bewildered* by *foolish extravagancies*.

Nov. 21, 1857.

For the New England Farmer.

PROPORTION OF THE LEARNED PROFESSIONS.

Agricultural editors frequently treat the complaints and murmurings of the sons and daughters of farmers with indifference, sometimes with contempt. Not long since the conductors of "one of our city papers" acknowledged the receipt of a communication of this character, and, without publishing it, scornfully advised the writer to leave the business, if he did not know enough to make money by farming. I have been pleased to see that such articles are treated as respectfully by the editor of the *New England Farmer* as are those which paint in more lively colors the charms of rural life.

Being a farmer's son myself, I know there are two sides to the picture. Boys and girls who have been brought up to the stern realities of farming, and who are acquainted with other kinds of business mainly by their outside appearance, and that often seen from a distance, which ever lends more or less of enchantment to the view, are apt to regard other occupations as more intellectual, genteel and profitable, and less irksome and laborious, than farming. Such feelings, I believe, are very common, and are honestly entertained. With a strong conviction of their correctness, I left the farm in early boyhood, and have been engaged in another business for more than one-third of a century. My occupation, habits and circumstances have afforded opportunities of contrasting the lives and fortunes of men of various professions, that few have enjoyed. Brought up in a strictly agricultural section, and familiar with almost every phase of the farmer's life, I have worked in various cities and villages of six different States. Possibly a few hints and suggestions from my experience and observation may prove acceptable to some of the younger readers of the *Farmer*, whose ideas and feelings are expressed by the articles recently written by "E. H. S." and "A Farmer's Son."

Dissatisfaction belongs to human nature. Beasts and birds may be contented, but man never is. Whether on the farm, in the shop, the store or the office, troubles and miseries, or something just as good, abound; and it will probably be no hard task to find troubles enough in any occupation to make a respectable contrast with the "Miseries of Farming."

Before attempting, however, to classify or contrast the "miseries" of the various professions, we will recur to the article of "E. H. S." His first position is, that "farming has been unduly extolled," and his second, that "it is one of the most laborious occupations." We are willing to allow that he has good ground for both of these positions. Advocates of agriculture, as well as of law, no doubt, sometimes use a little "gloss or poetry" in their efforts to do their duty to their clients. All have heard of the man who acknowledged that he had no idea how shamefully he had been abused, until his lawyer made his plea. And some farmers may have been nearly as much surprised, on reading an agricultural oration or essay, to find what an easy, independent, profitable and glorious business they had been engaged in all their lives.

But when "E. H. S." represents the "curses" of labor as resting exclusively on the broad shoulders of farmers; when he presents intellectual pursuits in their most attractive forms as the alternative to agricultural drudgery, that breaks down the constitution and shortens life; when he asks, in so many words, "*Who would not rather prefer the enjoyment of an educated mind, than the narrow scope to which the farmer in general is confined*," we think he is guilty of using a "gloss" of the thickest kind, and "poetry" of the thinnest sort. Such sentiments are fuel for a fire, smouldering in the breast of Young America, more dangerous than that which heaves and rocks old Vesuvius. To get into a profession! To find some easy business! To live without work! Think of the multitudes of our young men who are indulging such aspirations, and then of the cold facts, for instance, of a census report.

By the compendium of the Census Returns for 1850, it appears that less than one in a hundred of the whole population of the United States, is returned as belonging to the "learned professions." And yet from all quarters comes the warning cry, that the "professions" are crowded to overflowing. Is it safe, then—is it honest—to talk to the "toiling millions who till the earth," of choosing between literary pursuits and physical labor?

By the Abstract of the Census of Boston for 1845, it appears that the employment of

250	females	and	224	males	contribute	to Education;
114	"	"	566	"	"	" Health;
—	"	"	584	"	"	" Justice;
206	"	"	920	"	"	" Literature and fine arts.
—	"	"	104	"	"	" Religion.

These are the only divisions in the table of occupations that have anything like a literary look. And if we examine a little more carefully into the details, we shall see much even here that appears much like work.

With the educated physicians, are counted not only "quacks," but nurses, sextons, truss-makers,

teeth-makers, druggists and apothecaries, &c., as contributing to health.

City and State officers of all ranks, and even "19 balance-makers," rank with lawyers and judges, as contributing to justice.

While in the "literature and fine art" line there are 80 female and 258 male printers; 116 female and 142 male book-binders, with any quantity of newsmen, instrument makers, stamp-cutters, type-makers, engravers, sculptors, &c. &c.

Hereafter, who will charge Boston "literature" with exclusiveness, or Boston "justice" with illiberality! Yet such were the means necessary, in 1845, to swell the list of the "literary class" in the Athens of America to the sum total of 2388, in a population of 114,366—a fraction over two of such *literati* for each one hundred of the whole population!

With proper deductions, then, for those in the above classes, whose labor is physical rather than intellectual, the result in Boston is very similar to that in the whole country—only one in a hundred can hope for "the enjoyment of a cultivated mind," unless such cultivation is possible with daily physical toil.

In another article we may have something to say of the opportunities for intellectual development which "E. H. S." and the women folks of "A Farmer's Son" will be likely to find in leaving the farm for some other vocation.

A CITY MECHANIC.

Boston, December, 1857.

STABLES—HORSES.

In the early autumn, when the soft sunlight was on the hills, and the valleys were teeming with the rich products of the harvest season, we indulged ourself somewhat in *country* rambles, in looking in upon the homes of the farmers, in storing up valuable opinions as they fell from their lips, and which they had formed by experiment or observation, during the active period of farm operations. But after the leaves had fallen, and wintry frost had laid its icy hand upon the flowers and herbage, we turned our rambles in another direction, and looked about Boston and vicinity to find matters which might be interesting and instructive to our readers.

Among other observations, we have often been struck with the abuse and want of proper treatment of that noble animal, the horse; we have visited stables in all sorts of out of the way corners, some built on made land, where, under the floor, was soft black mud, filled with all kinds of noxious exhalations, and abounding with vermin. Again we have seen forty or fifty horses crowded into a space that one of our farmers would think not large enough for ten; with no means of ventilation, and with the hot steam from the manure, &c., making the atmosphere entirely unfit for any animal to breathe; in other places, we have seen valuable horses kept in little sheds or out-buildings which afforded little warmth, and exposed to severe storms, and many times in winter surrounded with snow and ice.

Having seen these things so many times, we were recently much pleased to have an opportunity of going over the stable of Messrs. PAGE, NOYES & Co., of Boston, for truck horses, and as we consider it as near perfect in its arrangements as it could well be, we will endeavor to give the reader a description of it.—It is in South Street, near the Old Colony depot, on a lot of land which affords them room for a large yard on each side of it. It is three stories high, and is seventy-two feet long by forty-one wide; the entrance from the street is by two large doors which slide up by means of weights and chains. The lower floor is devoted to the trucks and wagons which are all kept under cover, and, in order to occupy the space to the best advantage, lines of timber are laid down, which are plated with iron on the inside, and which are just wide enough to allow the wagons to stand between them, thus obliging the teamsters to arrange their teams in regular lines, and using every inch of space. On one side of the lower floor, is the scuttle through which the manure is put down, and which is boxed in perfectly tight, and ends at the roof in a large ventilator to carry off the steam from it. Over head we noticed long gutters to carry off the liquid manure, which is all conducted by these into the common sewer. The second floor, which is occupied by the horses, is worthy of attention. We ascended to it by means of a large inclined plane with an ascent quite easy for the horses. The floor is a curiosity in itself; it is made, first of a layer of boards, then two thicknesses of tarred felt, such as is used for ships' bottoms, then a thickness of a composition made for roofing, and next plank put on while the composition was hot, and then an upper covering of board. The stalls are arranged on each side of the building, fifteen on one side, each of which is four feet six inches wide by nine feet deep, and thirteen stalls on the other side, four feet wide by nine feet deep, with one stall for sick or lame horses, six feet wide; all of them are floored with thick plank above the other flooring. Behind the stalls is a groove cut in the floor, which receives all the liquids, and conveys them through holes to the gutters below. The open space or floor between the backs of the stalls is twenty-three feet wide, by seventy-one feet long, with windows at each end; in the middle of the floor overhead, is a scuttle about twelve feet wide, through which the light descends from a window in the roof of the same size. Along the whole centre of this story is a large beam which has hooks on it close to the ceiling, where each harness is hung directly behind the horse to which it belongs, and is high up as to be out

of the reach of the horses; so that if they should get loose, they could not pull them down and get entangled in them. Back of each horse are the curry-comb and brushes, and a rope which is passed across the back of the stall in the day, but not in the night time. At the end of the hall or space between the stalls, are the watering trough and bathing-tub for the horses, which are supplied with a Cochituate pipe.

The stalls themselves are made of inch and a half plank, and each feed trough is lined with zinc, and the edge plated with iron; the bars for the hay-rack are also of iron, and every part where the horse might gnaw or bite, is covered with zinc. The hay and meal are all kept in the story above, and the food is cut and mixed there, and then sent down to each stall through two shoots, one for the hay, and the other for the cut feed. The mixing trough is so arranged that the hay is cut and falls into it, and by raising a trap-door, as much or as little meal as is wanted runs into it, and a stream of water is let in from the other side.

On the same floor with the horses, is the extra harness room and place for the lanterns and other stable furniture. In front of each horse is a small hole or ventilator through the wall to allow bad air to escape, and in addition to these there are large ventilators on the roof, which allow all infected airs to pass off, so that the whole stable is as free from smell as a neat dwelling-house. The firm of truckmen to whom this stable belongs, does business in Milk, Pearl, and adjoining streets, and have from twenty-five to thirty as fine horses as are to be found in Boston, which are worthy of every care they bestow upon them. We have rarely been more forcibly struck with the truth of that sentence which declares that "a merciful man is merciful to his beast," than in looking over this finely arranged stable. We heartily commend this excellent example of Messrs. Page, Noyes & Co., to all who have the charge of horses.

For the New England Farmer.

THE NORTHEN SPY APPLE.

For the last ten or twelve years, no apple has excited so much interest among cultivators in New England, and been laid under so heavily for contributions of scions, as the Northern Spy. We ought now to have a liberal share of good fruit from these inoculations, but we see but little, and farmers seem as "shy" about speaking of it as is the reputation of the tree as a bearer.

At an Agricultural meeting at the State House, last winter, this apple was alluded to, when Mr. Hyde, of Newton, pronounced against it, and no one said anything in favor of it. The general objection is, that it is a poor bearer, and produced but little fair fruit, though the Messrs. Lake, of Topsfield, have thought differently. Mr. Hovey, in his *Magazine*, last spring, stated a new objection to it, which from various sources had come to his ears, viz: *dry rot.*

However, as it is far more agreeable to speak well of anything than otherwise, I wish to depose *(per contra)* that Mr. L. G. Horton, of Quincy, of this State, has presented me with four very fine specimens of this apple, and states that the largest and handsomest of this year's lot have been consumed, and that last year he raised some which his neighbors thought would not suffer from a comparison with those of New York. The scions were set in a healthy and vigorous bearing tree in 1850, and began to bear four years afterwards. There were only a few scions put in, and the product this season was about half a bushel. The specimens presented me weigh six ounces apiece, and are ten inches in circumference.

Mr. Horton states that his tree stands on an elevated dry soil, with a western aspect, and that the dry rot has effected the fruit to some extent, which corroborates the statement of Mr. Hovey, that a dry soil gives no exemption.

It seems to be quite certain that we can raise good Spies in our climate and soil; but if this new defect, the rot, continues, added to its sparse bearing habits, the Northern Spy must become a respectable outcast. D. W. L.

W. Medford, Nov., 1857.

For the New England Farmer

CATTLE SHOW NOTES.

On the 29th of October last, the Western Hampden Agricultural Society held their Show at Westfield. It was a cold, damp, drizzly day, but the thorough-bred farmers, and the famous *fat* and *working cattle*, of that section, were well represented. Few are the places that make as good a display under such weeping skies. Little rough Montgomery sent from her steep hills over thirty yokes of Herefords, most of them excellent in shape and drill. (Are not hilly towns better places to break cattle and horses than level ones?) An interesting, and I believe peculiar feature of this exhibition, is the weighing of cattle. I noticed many people gathered about the town *scales*, as yoke after yoke marched on. The owners appeared pleased; the judgment of the by-standers was improved. I do not know a more profitable attachment of Agricultural Shows, than this. *Platform scales* are the levelers of cattle society, as *common sense* is of human. There is no disputing their justice. There is no appeal from their decision. The extravagant boasting of the owners of mammoth stock is checked; the feeble hopes of the timid are raised. A few specimens of cows, colts, pigs and poultry completed the stock list. One venerable porker had fourteen of her children (out of a litter of nineteen) present, all fat, fair and forty pounds in weight.

The Hall next attracted my attention. Here was a good collection of vegetables, fruit, butter, bed-quilts, household goods, fancy work and pictures. Among the household manufactures were two pairs men's stockings, knit by an old lady over ninety-five years old. They looked very servicable and comfortable. Is it not strange that these homely but useful articles should receive

so little attention, from the present generation of feminines? There are probably twenty embroidered skirts and collars exhibited to one pair of stockings. We need to *reform*, as well as *retrench*. Ornament can never take the place of use, much less with safety precede it.

At 2 P. M. I listened to an address from M. B. Whitney, Esq., in the old Congregational church. His subject was, "The progress and demands of Agriculture." He traced the progress of this art, from Eden to Massachusetts, and from the days of Adam, down to that of the Fowlers and Taylors, of *fat cattle notoriety* in Westfield. He affirmed agriculture to be the pioneer of civilization, and the farmer to be the equal of any class in the world. He ridiculed the idea that there was any "dignity in labor." Mind dignifies labor. Physical strength, said he, is not the only requisite of a farmer. Agriculture can make no progress without science. Agricultural schools are as neccessary for girls as boys. Because there are no fixed rules in farming, rigid, systematic experiment should be the basis of all advice. Few farmers can tell the cost of raising stock, grain, &c. Such ignorance would bankrupt any other profession in the world, and yet farmers are little harmed by the present financial storm.

In concluding, he exhorted the farmers to rise to higher efforts, and to awake to their rights and duties. The whole address was replete with passages of beauty and sound common sense. It was well delivered, and listened to, and the youthful orator must have won golden opinions from most of his audience. We came away, with a higher regard for the farmer's vocation, and an inward resolve to do something for the great cause of agriculture. J. N. BAGG.

West Springfield, Nov. 14, 1857.

For the New England Farmer.

MANAGEMENT OF YOUNG COLTS.

MR. EDITOR:—I have not raised a great many colts, but think I know how they should be managed, while young and growing. I will say to Mr. Gray, of Brattleboro', Vt., that if I had a colt one year old that bid fair to make a horse worth one, two or five hundred dollars, I would give him a stable at night ten feet square, by himself, keep it well littered with sawdust, fine shavings or straw. I would not have him stand on anything wet, and would feed him all the hay, (good clean hay,) that he would eat, and feed him something besides every day; say carrots cut up fine, with a little Indian meal mixed with them, or a quart or two of oats, well soaked. If carrots are not at hand, potatoes will do. If I intended to keep him for my own use, I would teach him to eat almost everything, such as sour milk, good hog swill and pumpkins. I would not *break* him to do all these; but I would teach him, caress him, make him think, if possible, that I was his best *friend*.

Colts want exercise, and should have a warm yard to run in all the pleasant days, but *not in the mud*, or with horned cattle. A blanket is seldom necessary.

Mr. Gray inquires: "when should he be broke?" I say never, *never!* Teach him as much as you can, but don't *break* him! that is all out of fashion. Teach him to do as you tell him, to come and go at your will; make a particular friend of him, and you may use him at any age you please, but be careful not to use him hard or badly. Cattle may be used at the age of two years, as well as boys at seven or eight; and when he is two, three or four years old, a few days before you wish to use him, put on the hames, put him in the thills, and let him stand several hours; stay by him, fondle him all over, lead him about and call him some name. Do this for a few days, and the first time you hitch him to a buggy, he will go as you tell him. When he will go well before a carriage, then put on the martingales, and a check, if he does not carry his head to please; by degress draw his head as you wish to have him carry it, and in a short time it will become a habit that can easily be retained. The time was, and is *now*, in some places, when every one thought a colt must be bitted; that is, put a great strong bit in his mouth, and draw his head into the breast, and have him throw himself down, while a cart whip was lacerating his sides, all of which is just the thing to spoil a colt. I say never bit or *break* a colt, nor burn the hampers. G. V.

Plainfield, Mass., 1857.

For the New England Farmer.

SWITZERLAND.

LETTER FROM MR. FRENCH.

MY DEAR BROWN:—From Lucerne, where you last had accounts of me, we went by rail and diligence to Berne, about one hundred miles. Berne is said to mean *bear*, in some language or other, and a bear forms the armorial *bear*ings, (excuse the pun, unperceived until the word was written,) of the city; and to keep up the idea, six live bears are kept at the city's expense in a stone den, built at considerable cost outside the gates, and figures of bears, carved in wood, formed in plaster and cast in iron, abound in all the shops. At one of the numerous fountains which embellish the city, a huge iron bear reposes at each corner, and as I passed in the morning, some little girls were amusing themselves by washing the bears' feet. The town clock is reckoned a great curiosity. We went to see it strike, and saw the figures of bears which decorate it, wag their heads. There is also a figure of a King, who opens his mouth, and a cock that crows when the clock strikes twelve.

The city is built in a manner quite peculiar, the sidewalks being under arches, the houses projecting overhead, so that you may go over the whole city in any weather unexposed to rain or sun, except in crossing the streets. Seeing a notice of an "Exposition of Industry," we embraced the opportunity to see something of the mechanical skill of the Swiss. We found the exhibition arranged with much taste, and of a character to do credit to any country. There were iron castings

equal to the best I have ever seen, wood carving superior to any that can be shown in any other country, I presume, a loom in operation weaving beautiful figured ribbons, silks in all stages, from the cocoon to the finished fabric of most beautiful quality, linen and woolen cloths of all descriptions, and a thousand miscellaneous articles such as we find in our own exhibitions. I remember especially fire-arms of various patterns and elaborate finish; the Swiss, by the way, claiming to be the best rifle shots in the world.

A contrivance for a self-opening and self-closing door we thought worthy of the cutest Yankee invention. You walk towards the door, and before you can touch the handle, the door parts in the middle, and moves noiselessly back into the wall, and when you have passed through, closes as quietly behind you. It is arranged so that your weight on a platform overcomes a counterpoise which keeps the door closed. The agricultural implements are of a heavy and clumsy make, but not more so than those in use in England.

From Berne we went by diligence to Thun, about three hours' ride through a country thoroughly Swiss. The houses have the widely projecting roof, sometimes extending twelve feet beyond the eaves, and many good two-story houses have the barn under the same roof, and in some instances I notice two good houses and a large barn, all under one large roof. The barn is usually finished with lattice-work, so that you can see the hay, and the roofs are covered with tiles or thatch. The sides of the houses are covered often with shingles cut in semi-circles at the exposed end, which gives a very tasteful finish.

Great attention seems to be given by the Swiss to their manure heaps. Close by every farm house is a large square heap of manure, composed of whatever can be collected about the premises, and carefully laid up with straw like a cider-mill cheese. Whether these people have the ordinary sense of smell I do not know. At least I am sure they have not a very strong sense of propriety, whatever may be their appreciation of convenience; for this mixture of men, women and cattle under the same roof, with fortifications, strong ones, too, of manure heaps at the door, does not indicate great refinement.

In the summer many of the cows are taken on to the mountains to graze, and you may see, perched up almost to the clouds, small houses occupied by the butter and cheese makers in their season. The grass seems to grow to the very tops of the mountains here, and fields of grain are seen on hill-sides so steep, that it looks from below as if a man could not stand a moment on the declivity. Some of the highways are planted with trees and unfenced, while others are fenced with living hedges. We next stopped, after a steamboat sail of an hour, at Interlachen, a sort of nest between the snow-capped hills, where many English and American families spend their summers. We took a carriage here next morning and visited Lauterbrunnen and the Staubbach Falls, or Cascade of Dust, a very small stream which falls some nine hundred feet over a precipice, a sort of perpendicular mountain side. The effect is very fine, the water being divided by the fall into fine white spray, although the stream is very small, not larger apparently than might run through a nine inch ring. However, Americans must bear in mind in their travels, that water power is not so abundant abroad as at home, and if Niagaras do not roar, and Ontarios and Superiors do not roll in these little countries, we must be satisfied if they make the best use of their means. The common houses in this part o. Switzerland are built in a very singular style. They are constructed of squared timber, say six inches by ten, laid up like a log house, the walls being solid and the timber halved where it crosses at the corners. The timber is worked smooth and even, presenting a good surface, and the ends are left long towards the eaves and cut into large brackets in very pretty style, to support the roof. Over the principal door, across the whole front, are usually carved, in wood, inscriptions in large letters, occupying two or more lines. Our guide interpreted some of them, and we found they usually expressed the name of the owner and of the builder, with the date of erection, and an invocation of God's blessing on the house. Sometimes a short text of Scripture is added. Similar inscriptions I observed on some pieces of valuable furniture, in the form of a proverb, or the like. From Interlachen we took post horses and a guide to Kandersteg, seven hours, nobody here having any idea of miles. We passed round Lake Thun on a very picturesque road, between mountain and lake, and stopped at an inn to rest our horses. The driver went into the house and brought out a large loaf of wheat bread, nearly as large as a water-pail, and cutting it open, gave each of his horses half. I cut a slice off of one horse's share, and ate it, and found it the same that was furnished us. At Frutigen we stopped an hour. In front of the inn are a fountain and several troughs, in a public square. Here the women were at work; some washing clothes, others preparing vegetables for cooking. One sensible girl brought out a basket of potatoes, and set them under a spout and washed them with a broom. On our way we saw women carrying liquid manure strapped on to their backs, and applying it to cabbages, and others moving solid manure in the same way. Our guide says that a man's wages here is only about ten cents a day at farm labor, but I am not willing to endorse

the statement. There is, however, every indication of poverty. Beggars beset us at every step. Boys and girls, and even women, follow the carriage at every hill, holding out their hands and begging piteously, seeming to be thankful for any small coin.

I know not whether I have before spoken of the goitre, a horrible swelling of the glands of the neck, which seems to affect a large proportion of the people. It is a dreadful deformity, and I am told sometimes produces death by pressure on the organs of respiration.

After a glorious ride till nine in the evening, we arrived at Kendersteg, through magnificent mountain passes, and are now in the wildest place, I think, in all wild Switzerland; and here for the Sabbath day we propose to rest, preparatary to crossing the mountain pass. And with best wishes for you and yours, farewell.

Yours, &c., HENRY F. FRENCH.

For the New England Farmer.

FARMING IN NEW JERSEY.

MR. EDITOR:—Having a little space for writing, I thought to put a few ideas on paper and send them to you.

I left my home in the south part of Massachusetts on the 23d inst., *via* Fall River and New York, and arrived in New Jersey on the evening of the 24th. The sail from Fall River was interrupted by a thunder-storm, and a "right smart gale of wind," as an Ohio Dutchman would call it. The "Bay State" had to tie up at a Rhode Island wharf, until the roughest of the weather's sneezing was over. Then the sea had no little swelling and roaring, like Jordan and the lions. However, the Bay State is a pretty safe State, and our morning arrival at New York happened at 12 M.

Visiting some of the agricultural warehouses in *Gotham*, one cannot fail to observe the difference between them and agricultural warehouses in Boston.

In New York, the sales of fertilizers far outstrip the Boston trade. This suggests a thought. If, as is generally admitted, the soils of New York and New Jersey are so far superior to those of the New England States, without the aid of extra fertilizers, why should not the Boston trade show a greater record of sales, if the farmers of New England seek to supply the deficiencies of New England soils? The farmers and gardeners of New York and New Jersey find it to their profit to procure vast quantities of plaster, phosphate of lime, poudrette, &c., &c., for their soils, and then send their fruits and vegetables to supply our New England cities, at so cheap a rate as to press upon our New England producers. Are not the New England soils worth improving? Certainly, we must say, they are. And much of the soil of New England, now condemned as hopelessly sterile, is as good, naturally, as soils here, from which farmers and gardeners are making great profits by the sale of fruits, vegetables, and products of the dairy.

I am now writing from the village of Irvington, in Essex county, New Jersey. The soil of this vicinity is very peculiar. The subsoil has the redness of madder. Its adhesiveness in a rainy time shows the presence of alumina. There are similar lands in some parts of Bristol county, in Massachusetts. South of the village of Assonet, there are lots which receive the name of "*red ground*," and which present similar natural characteristics to much of the soil in this country. Yet one acre here is made to produce more than twenty or even fifty acres there. At the same time, these improved lands give a profit to the owners and cultivators, and a large profit, while they sell their products at a much lower figure than they will at any time command in the eastern markets. Much land in this vicinity, now used for farming purposes, is under so high a state of culture as to claim two or perhaps three hundred dollars per acre. While writing the last two sentences, two gentlemen have been discussing the value of a small tract of land, only used for farming, in this neighborhood, for which the price of not less than $400 per acre is named.

A very different system of cultivation, and of soil improvement, has been pursued here, than ever obtained much favor in New England.

Mechanic arts have unquestionably received greater attention with the many, in the New England States, than here.

The agricultural implements, in the New York warehouses, are, as a whole, more coarse and clumsy than those made in Boston. They are also less substantial, and sell at a lower figure.

I would trace out these peculiarities some farther, but think I have "spun this yarn" long enough. So perhaps I will write you again from these regions, "in a few days."

Yours, very truly, C.

DEPRECIATION OF PROPERTY.—We hear of the case of a gentleman of this city who was appointed trustee of the estate of a deceased person, and guardian of some minors, and who thinking *safety* should be mainly consulted in the investment of the funds thus committed to him, sold off the stocks of various corporations belonging to the estate, and invested the proceeds in State and city securities where he was sure of six per cent. interest. The appraised value of this property was about $150,000 two years ago. The difference to-day between the market value of the stocks sold and the securities now held by the party, is no less than *forty thousand dollars.*

It is reported in financial circles that the personal estate of an opulent merchant who died in Boston less than four years ago, valued in 1854 at $1,800,000, and consisting mainly of railway shares and bonds, has shrunk so much during the two past years, that the depreciation is more than a *million of dollars.*

It is reported that the manufacturing stocks owned by a single family have depreciated more than a million dollars in value within two years. The personal property of many individuals has faded away during the present year "like dissolving views," and the surprise attending the change is similar in many respects to that which usually attends those novel exhibitions.—*Transcript.*

For the New England Farmer.

ON THE REALITY OF THE SCIENCE OF MEDICINE.

BY WILSON FLAGG.

Moliere wrote a comedy for the purpose of exposing the blunders of physicians, and the absurdity of some of their pretensions; but his comedy is no less severe upon the follies of patients than upon pedantry of practitioners. Some of his pleasantries are extremely amusing. "What do you intend, (says a female neighbor to a father,) sir, by having four doctors to your daughter? Is not one manslayer enough for one person?" Dr. Sanarelle answers, "Be silent, miss, four opinions are better than one, any day."

Lisette—Then you will not let the poor child die in peace, but must needs let the doctors worry her to death?

Doctor—Do you think these gentlemen will really put her to death?

Lisette—No doubt at all of that. The other day a friend of mine, by the best reasoning in the world, proved to me how a person of her acquaintance, who was thought to have died of a fever, died, on the contrary, of four doctors and two apothecaries.

Dr. Sanarelle—Hush! you will offend the gentlemen in attendance.

Lisette—Well, listen to me, sir. Our cat has just recovered from a fall she had from the top of the house into the street below. For three days she ate nothing, and all that time she could not stir a paw; but luckily for her, there are no cat-doctors here. If there had been, they would have bled and medicined her life out to a certainty."

The tables seemed to have been turned, since the time of Moliere; for at the present day those persons swallow the most medicine who doctor themselves without consulting a physician. This is proved by the well known fact that the quantity of medicine which is sold from the apothecaries' shops to supply the demands occasioned by the *recipes* of physicians, is not one-tenth part so great as that which is sold in the form of patent nostrums. A careful study of the history of medicine, notwithstanding all the pleasantries which have been uttered at its expense, would convince any intelligent person that the theory and practice of medicine is a true science, having its foundation in nature. It would likewise convince them that there is no more uncertainty in its results, than in the results of any other branch of human knowledge, if we except the mathematics and what are called the exact sciences.

The theory and practice of medicine very closely resembles the science of agriculture, in the practice of which, an experiment that has succeeded nineteen times consecutively, will perhaps fail on the twentieth trial. We may apply lime or any other specified material, successfully to nineteen different soils, with manifest advantage. When applied in the twentieth case, the soil is injured by it, and rendered unproductive, because its hidden ingredients were such as to require a fertilizer of a different character. The science of chemistry enables us to analyze a soil, and to determine by this analysis what kind of substances it requires to render it productive. Still, with all the light afforded us by chemistry, there is always some degree of uncertainty in the results of chemical applications to the soil. In the application of guano to the soil there is some danger of injuring the crop, because a great deal of experience and judgment is necessary to determine the precise quantity and the precise manner in which it should be applied.

A still greater amount of judgment, learning and experience is required for prescribing medicines successfully for different constitutions. Everything that is necessary to be done cannot be laid down in books, but must be left to the judgment of the physician. Consider then the importance of selecting one who has had the advantages of a complete education, to make amends for any natural deficiency of judgment which every man is liable to possess. It is evident from these circumstances, that a more comprehensive intellect is required for the successful practice of medicine, than for the attainment of distinction in the exact sciences. In chemistry it has been ascertained with perfect precision, how much of a certain kind of acid would be required to neutralize a given quantity of a certain alkali; but no rule of medicine could decide how much opium would be required to alleviate a spasm. This must in all cases be determined by the judgment of the physician. The chemist can proceed in all his operations by rule; the physician, though guided by certain laws, must prescribe, not by rule, but by judgment. It is this circumstance that causes so many people to doubt the reality of the whole medical science. We might for the same reasons deny the reality of the science of navigation. The best navigator in the world might by some accident, or by some error of calculation, run his vessel ashore and dash her to pieces upon the rocks, while at the same time and place an inferior navigator had carried his vessel into harbor. Should we on this account ever afterwards employ ignorant navigators to pilot our vessels? If we did so, we should follow the example of those who, having witnessed certain mistakes in the practice of educated physicians, resolve ever afterwards when they are sick, to place themselves in the hands of a quack.

Chemistry, to return to our parallel, can measure the exact amount of oxygen that must combine with a certain amount of hydrogen to produce water. Indeed, nearly all its operations are certain and exact. A person, therefore, with a good memory, though possessed of an inferior share of judgment and comparison, might be a good chemist. If fever was the effect of an acid, and this acid could be measured, the physician might cure his patient, on chemical principles, by prescribing a definite portion of alkali. But the diseases of the human system cannot be managed by a simple rule; and on account of the different aspects they assume, under different circumstances, every remedy is uncertain. The physician must watch its effects, and modify his prescriptions according to certain changes in the aspect of the disease.

Hence we may account for the remark of Dr. Gregory, a celebrated English physician, that "nine-tenths of the practice of medicine consists of guess-work." Another celebrated man left the practice of physic, giving as a reason for his

conduct, that he was tired of guessing. But it is this very circumstance that elevates the science of medicine above the exact sciences, because it requires the highest exercise of the human intellect, while the exact sciences can be attained by a dunce who has a good technical memory. There is such a thing as enlightened "guess-work," which may be defined, *the exercise of the judgment in applying certain rules to uncertain cases.* The navigator is obliged to use a great deal of this guess-work; yet there can be no doubt that an intelligent and well educated navigator, with the aid of science, the compass and the barometer, would in the majority of cases guess more accurately than one who was ill educated and without these aids.

The effects of a stimulant or narcotic, or any other medicine, vary according to the susceptibility of the patient to its influence. A frequent and constant use of opium, of ardent spirits or cayenne pepper, may so harden one to their effects, as to enable one who is accustomed to the use of them to bear a dose without any apparent effect, which would destroy the life of another person. "This principle, (says Dr. Paris,) may be illustrated in a clear and forcible manner, by the different sensations which the same temperature will produce under different circumstances. In the road over the Andes, at about half way between the foot and the summit of the mountain, there is a cottage, at which the ascending and descending travellers meet. The former, who have just quitted the sultry valleys at the base, are so relaxed, that the sudden diminution of temperature produces in them the feeling of intense cold; while those who have just left the frozen summits of the mountain, are overcome with the sensation of extreme heat.

"But we need not climb the Andes for an illustration. If we plunge one hand into a basin of hot water and the other into one of cold water, and then mix the contents of each vessel, and replace both hands into the mixture, we should experience the sensation of heat and cold, at the same time by the same fluid."

The hand which had been in the hot water will feel cold, and that which had been in the cold water will feel warm. The physician is obliged to take all such circumstances into his calculation before he prescribes for his patient; a little false information given him by the attendants may lead to consequences which would be attributed to an error of judgment on the part of the physician. The public is not generally aware how frequently the reputation of a physician suffers, on account of the ignorance, carelessness or stupidity of the attendants of the patient.

Our common aliments may in certain states of the constitution act upon one as powerful stimulants. In an old volume of Medical Reports is recorded the case of a miner, who after remaining eight days without food, was killed by being placed on a warm bed and fed on chicken broth. There is no end to the influences to which we are constantly exposed, that serve to increase or diminish our susceptibility to the operation of medicines. All these circumstances involve the practice of physic in so much uncertainty, that the best intellect must be entirely devoted to the study and practice of it, to insure success. Voltaire, who excelled almost all men in the sagacity of his observations, remarked that "those men who are occupied in the restoration of health to other men, are, when honest, above all the great of the earth. They even partake of divinity. No man is more estimable than a physician, who having studied nature from his youth, knows the properties of the human system, the diseases that assail it, the remedies that will benefit or heal it, *who exercises his art with caution, and pays equal attention to the rich and the poor.*"

WILLARD'S PATENT SEED PLANTER.

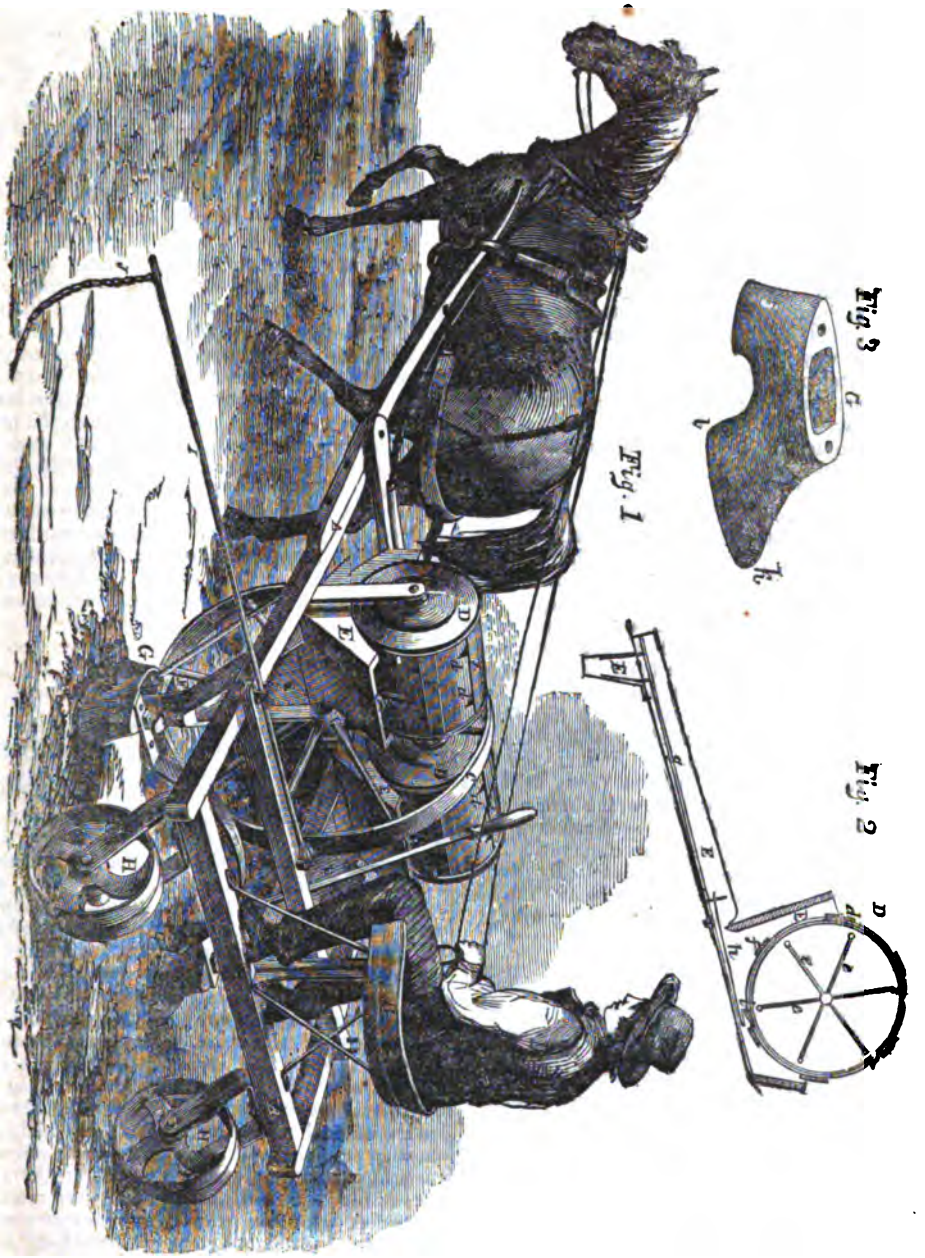
This machine, the invention of Hosea Willard, Esq., of Vergennes, Vt., and for which letters patent were granted Oct. 6, 1857, is for planting all kinds of grain in drills or hills, covering and compressing at the same time. The grain is placed in the two cylinder holders, D D. These holders are made to revolve by means of the wheel E. In the inside of each holder is a reel, as seen in fig. 2, which is made to revolve in the opposite direction from the motion of the holders. Each holder is divided into two apartments, one to contain the grain, and the other to contain plaster or any other kind of fertilizer. The machine can be regulated to drop any given number of seeds, or amount of the fertilizer, into each hill, and to make the drills any distance apart that may be desired. The grain is covered by the shoe, as seen in fig. 3, and the drills compressed by the rollers, H H. It will be perceived that the coverer is so constructed as to render it impossible for large lumps or stones to get upon the grain. The position of the coverer can be regulated so as to make the drills as much below the surface, and to cover as deep or shallow, as may be desired. The dropping of the seed into each hill being directly in sight of the driver, it is impossible for any hill to escape being seeded without being observed by him, which is an advantage over all other machines. The chain, I, is to mark out a track to guide the driver, thus enabling him to make the drills all of the same distance apart. As will be seen the machine plants two rows at a time, and as much during a given time as a horse can walk over, from 15 to 25 acres per day.

The machine is now on exhibition at the Crystal Palace, and commands the attention of agriculturists in all sections of the country. It is examined by thousands every day.

The above Planter is manufactured by the Patentee, at Vergennes, Vt. Price of Planter, $30. Weight of machine, 230 pounds. County and State rights for sale at prices which will enable purchasers to realize very large profits. Apply to HOSEA WILLARD, Patentee, Vergennes, Vt.

☞ In Rockville, Ct., 1300 frogs have been found in a spring only four feet in diameter.

WILLARD'S PATENT SEED PLANTER.



For the New England Farmer.

WINTERING BEES.

For the benefit of those readers of the *Farmer* who may not be acquainted with my method of wintering bees, I will give a few directions. First, be sure that you start with none but first-rate stock. With most bee-keepers, success in winter depends alone on this point, as they often neglect their bees from fall till spring, and therefore they derive no benefit from any care that they might bestow. The requisites of a good stock are, first, a *strong* family; second, *sufficient* stores; third, freedom from disease of the brood. Examine the hives on the first really cool mornings. The best stocks will show bees in nearly all the spaces between the combs; very weak ones, only between two or three. The best families cannot be readily frozen to death, but weak ones may, and often are. Strong stocks are often smothered by an injudicious endeavor to protect them from the cold. In fact, such can hardly be lost in any other way.

To winter bees in the open air, choose a place where the sun can strike the hive, at least part of the day. Ventilate, by raising the hive just enough to let the bees pass, but not the mice. There should also be a hole in the side of the hive, to guard any chance of its getting closed around the bottom. There should also be several holes through the top of the hive, and an empty cap set over it; much of the moisture arising from the bees will pass up into the cap, and prevent mouldy combs. Should the weather be pleasant immediately after a new light snow has fallen, the bees may generally be kept in the hive by shading with a board set before it. If the air is sufficiently warm to melt snow that is old and crusted, or even soften it, there is no risk in letting them fly, they will rise as readily from the snow as the ground. There will be some few that are unable to fly, and will get down in either case; the difference is only in appearance; when on the snow, every one can be seen readily; when on the ground, it requires close observation. At any rate, it would be safer to lose half of them on the snow or ground, than to close the hive longer than a few hours at once during winter.

WINTERING IN THE HOUSE.

If a large number of stocks are to be wintered, second and third rate ones can often be carried safely through, that in the open air would be a perfect failure. There can be fifty or more packed in a room ten feet square, the combined warmth probably keeping the temperature above the freezing point at all times. The room should be *perfectly dark*, and if *close*, a passage for admitting air at the bottom, and another at the top for its exit, should be made, say two inches square, and so constructed as to *exclude* the light. A dark, warm, dry cellar, will answer equally well, without the passage for air, unless the bottom is clay or cement.

To get rid of the moisture that is constantly generated, the hives should be turned bottom upward upon shelves with blocks under to raise them an inch from the shelf, the holes in the top being left open to allow free circulation of air. By having several tiers of shelves one above another, a great many may be packed in one room. I have frequently put in two hundred stocks, on three tiers of shelves, in a room twelve by eighteen feet. A large number in a room is much better than a small one, on account of the additional warmth generated; and, if a room cannot be kept uniformly warm by the number of stocks, or by other means, leaving them out doors is preferable. To avoid keeping them in the house longer than necessary, it is well to let them have the advantage of all the pleasant weather likely to occur before housing. Put them in on the first really severe weather; the first snow storm, or, when *sure* that *winter has* commenced. Let them be disturbed as little as possible. Occasionally looking to them, to see that all is right, will not materially injure them. They may be put out the last of March, or first of April; choose the middle of a fair day, *when the air is warm*, no matter about the snow being gone, if it has only lain long enough to have a crust. A dozen or fifteen put out at a time, and in two hours as many more, is better than all at once.

This method of wintering bees is not merely theoretical, but the result of many year's experience. With the exception of two, over five hundred stocks were carried safely through the past winter, under this management. I find there is generally much reluctance to turning the hive over, and nothing to confine the bees. I have had letters of inquiry for additional assurance that I meant what I said. When this method is fully tested, I am persuaded it will be preferred to any other.

M. QUINBY,
Author of Mysteries of Bee-keeping Explained.

St. Johnsville, Montgomery Co., N. Y.

SUB-SOIL MAPS.

From the following, which we clip from the *Country Gentleman*, it will be seen that the French Government has employed a Mr. Duman, of Paris, to construct maps exhibiting the character of the sub-soil of the whole of France, to be accompanied with others of the geographical and geological features of the country. It is due to a citizen of Maryland, who for many years, and entirely at his own cost, has most industriously pursued the investigation of the qualities of the soil and sub-soil, to claim for him the credit of a method to which the French government attaches so much importance. Professor Baer, of Carroll Co., some fifteen years ago lectured before the Legislature of Maryland, with maps variously colored, to show the variations in the sub-soil, and has since been pursuing and perfecting his plans, and has now on hand a considerable collection of such maps, handsomely executed, and showing to the eye at a glance the character and variation of sub-soils, which have been the subjects of his investigations, as well as the remarkable effect upon the growth of plants of a sub-soil containing noxious elements underlying a genial surface soil. Professor Baer pursues the same method in teaching Chemistry, having large maps on which are displayed for instance the whole number of bases and acids, and the proportion in which they combine and their degrees of affinity indicated in such a way that the learner gets the lesson with remarkable facility.

SUB-SOIL MAPS.—We see it stated that Mr.

Duman, of Paris, has recently constructed, by order of government, a map exhibiting the nature and character of the sub-soil for the whole of France. It is designed to be used with, and to accompany another map descriptive of the geographical and geological features of the surface. The one exhibits with the greatest accuracy, all information pertaining to the surface, while the other reveals what lies immediately below the surface, thus affordiug indications of great value to the agriculturist, and to those searching for minerals or building materials. Similar maps for this country would be of the greatest importance to all who are in any way connected with the soil.—*American Farmer.*

For the New England Farmer.

WHITEWASHING TREES.

A communication with the aforesaid heading, from Peekskill, N. Y., was published in the *N. E. Farmer* of September, with the signature, "C. A. L.," taking exceptions to the editor's views on that subject. "Remarks" were added to the communication, stating that "our views are not materially changed by the statements of our correspondent." The same number contains an article with the heading, "Never Whitewash Trees." To this "C. A. L.," of "Berkshire," replies in the *N. E. Farmer*, (weekly,) of the 24th of October, with no slight exhibition of arrogance and conceit, the usual style of defence of such as feel conscious of having a bad cause to defend, seeming to forget, that stale witticisms, and personalities are poor substitutes for science, or anatomical and physiological facts.

Before proceeding to notice his misrepresentations of yourself, Mr. Editor,—for we both alike come under his censure and condemnation,—I desire to call attention to some of his statements made in the communications referred to:

"C. A. L.," *September.*

"You [alluding to the editor] compare the bark of a tree to the skin of an animal, and say that 'their functions are analogous.' I acknowledge the analogy in one respect, they are both on the *outside of the individual* (?) and that is the only resemblance between them. There is no office performed by the bark of a plant or tree which corresponds with that performed by the skin of animals; at least no such function has ever *been demonstrated to exist*, and it would be very easy to ascertain if it absorbed carbonic acid, or gave off oxygen. * * * You speak of 'filling the pores of the bark and thus effectually preventing the action of the atmosphere, and arresting the internal action also.' Now, as the *only function of the bark is protection*, and to some as a deposit of fibrin, no such injury can possibly result from covering the outside even with impenetrable varnish."

"C. A. L.," *October 24.*

"Both vegetable and animal bodies are subject to disease, as well as to the attacks of parasitic animals, and remedies and preventives or *prophylactic* measures are just as proper in the former, as in the latter case. *Conceding the bark of trees to be endowed with as important vital functions as the skin of man*, analogy would lead *us* to the conclusion, that as *local* applications are efficient remedies *in the one*, so also they would probably prove to be *in the other*. Sulphur, and lime and mercury, which are so destructive to *human parasites*, are no less so than to vegetables; [i. e. mercury is as sure to destroy *'human parasites'* as it is to kill vegetables] and the process of *whitewashing is no more unnatural* or *irrational* than applying sulphur or *mercurial ointments* to the epidermic coat of animals." [Not one whit more so; and that is enough to condemn whitewashing to eternal refutation.]

He says, "Your correspondent seems *ignorant* of the fact, that the 'stomata' or 'pores' of which he speaks, *are found* chiefly in the epidermic coat of the under surface of the leaves, and rarely found elsewhere." Does he? The communication referred to has the following language: Drs. Candolle and Hedwig, celebrated naturalists, demonstrated, that "the moisture required by the plant for its nourishment is received through the pores of the bark, of the stem, the branches, the fruit and the roots—*no less than through the stomata of the leaves*, and the open mouths of the spongioles." So much for the charge of "ignorance," concerning "stomata" or "pores."

He next charges your correspondent with "garbling the language of Schleiden," with reference to the function of the epidermis. This learned German botanist, describing the epidermis, says, "The cells of this layer are so firmly united that it may generally be stripped off the plant as a continuous membrane. It becomes clothed sooner or later with a layer of varying thickness, of a homogeneous substance, which receives beside, a thin coating of wax or resin; thus the enveloping membrane becomes impenetrable by fluids, and even repels them, since water runs off it as from a greasy substance. In certain places, however, [let the reader take particular notice,] *little orifices are left between the cells leading into the interior of the plant.*

"In these orifices usually lie two crescent-shaped cells, having their concave sides applied together, so as to leave a slit open between them, but otherwise closing up the orifice. These slits, through which the plant communicates with the atmosphere, and expires gases and watery vapor, are opened wider, or contracted, as may be required. The orifices with crescentic cells are called stomates, and the whole layer in which they occur is the epidermis of the plant." (Pl. 1, Fig. 12.) See Poetry of the Vegetable World, Edited by Alphonso Wood, author of the "Class-Book of Botany;" —from the London edition, translated by A. Henfrey, F. L. S.—pp. 60–1.

As will be seen by comparison, "C. A. L." quotes from a paragraph marked by four periods. He copies the first, omits the second, copies the third, and omits the fourth. The paragraph is given entire above, in order that the reader may have the words of Schleiden on this subject, entire, as given by the translator, and settle the question as to the "guilt of garbling." "This writer," says "C. A. L.," meaning Schleiden, "represents the function of the stomata to be, to evaporate the superfluous water *absorbed by the spongioles.*" Indeed! How does it thus appear? The word spongiole is not mentioned by S. in connection with the function of the epidermis. And moreover, he admits here, what, in another part of his communication as quoted, he says, "Your correspondent seems ignorant that the 'stomata' or 'pores,' of which he speaks, *are found chiefly in the epidermic coat of the under surface of the leaves*, and are rarely found elsewhere." Notwithstanding the charge of this "seeming ignorance," before finishing the paragraph, he quotes S. to prove that the functions of the epidermis is performed through stomata.

"Stomata," says a French botanist, "exist in a more or less distinct manner in all the foliaceous surfaces of vascular plants—viz.: in the leaves, properly so called, in the stipules, *in the green bark*, in the calyx and pericarps which are not fleshy." In summing up on this subject, the aforesaid writer says,—"1st, that the customary use of the stomata is for perspiring water, which must be distinguished from simple evaporation;

2nd, that it is not impossible that they may also serve, in some cases, for absorption; 3d, that it is equally possible that they absorb water during the night."

Prof. Gray says, "Stomata or breathing-pores are orifices connected with a peculiar structure in the epidermis of leaves, and *other green parts*." "Through these," he remarks, "the vapor of water and air can freely escape, *or enter*, as the case may be. The apple tree leaf, where they are under the average as to number, contains about 24,000 stomata to the square inch of its lower surface."

"The experiment alluded to, of placing a dried, shrunk and shrivelled plant in water, and its imbibing moisture, proves nothing in regard to the vital function of the epidermis of the bark of trees," says C. A. L.; "it is a phenomenon of *purely physical* endosmose." Strange that so learned a physiologist should have adduced this as a case in point. That absorption, as well as exhalation, is performed by the leaves [if by the stomata of the leaves, then why not of the bark?] of plants, is known to every farmer who has observed *the effects* of a heavy dew in reviving his wilted corn, but few are so *stupid* as to imagine that *this effect* has been produced by absorption *from the stalks!*" (??) The incongruities of this question are its best refutation.

Endosmose, as defined by Webster, signifies "The transmission of gaseous matter or vapors through membranes or porous substances inward." "*Purely physical* [not metaphysical!] endosmose is a phenomenon" that fully demonstrates and confirms the porosity of plants, according to C. A. L.'s own showing. So he confirms Drs. Candolle and Hedwig's experiment by endeavoring to overthrow it.

Hales, in his "Vegetable Staticks," gives among his numerous experiments the following:

"I took a cylinder of birch, ['impenetrable to the air,' says C. A. L.] with the bark on, 16 inches long and ¾ inch diameter, covered both ends with cement; also the old eyes where shoots had been cut off; and by the aid of the air-pump demonstrated that the air passed through the bark. The same was proved true of other kinds of wood."

Dr. Grew, a botanist, observes that "the pores are so large in the trunks of plants, as in the better sort of thick walking canes, they are visible to a good eye without a glass; but with a glass the cane seems as if it were stuck top-full of holes, with great pins, being so large as very well to resemble the pores of the skin in the end of the fingers and ball of the hand. In the leaves of pine they are likewise, through a glass, a very elegant show, standing almost exactly in rank and file through the length of the leaves." (Grew's Anatomy of Plants, p. 127.)

More authority bearing on the point under consideration, of the highest order, from Germany, France, and England, might be furnished, but what has been cited is deemed sufficient to establish the porous texture of the epidermis, or to show that it has stomata. This, moreover, is admitted by "C. A. L.," who, nevertheless, says in another place, "L. W." must not expect *me* nor *your readers* to receive his *ipse dixit* as to the functions of the epidermis, unless supported by some acknowledged authority; nor must he expect to escape by locating *stomata or pores in the bark*, instead of the leaves, and then applying to the former what is designed for the latter." This was no assertion of L. W., as the reader may see by referring to his article on page 438 of the September number of *N. E. Farmer*. It was there shown to be the doctrine of Drs. Candolle, Hedwig and Schleiden. So it was not "a tyro's" *ipse dixit*, and may give further occasion to show that a "tyro" cannot overthrow it, though he tug never so hard; and, when by study he comes to know really, as much as he would receive credit for now, he will not attempt it, for such folly could only be equalled by offering his head for a battering-ram; for facts serve as a more impenetrable wall of defence than any which encircled the besieged cities of olden time.

"L. W. would admit 'a little soap.' What! close the 'pores' with this viscid substance, which it is far more likely to do, than whitewash; and then how unnatural to wash trees with soap and water, as if they were dirty babies or coal-heavers!" Is it the tendency of the application of soap to "babies and coal-heavers" to stop the pores of the skin? If so, then it may have a similar effect upon the epidermis of trees when applied. L. W., by the way, did not recommend the use of soap.

Having further demonstrated the function of the bark, it goes further to confirm your position, Mr. Editor, together with that of your correspondent, that orchardists should never whitewash their fruit trees.

Your correspondent "L. W.," on page 430 of *N. E. Farmer*, Vol. 9., remarked in the first paragraph, that, "The orchardist should avoid all sorts of washes that leave a coating upon the bark, no matter what they are, nor what is claimed for them by charlatans or empirics." In the last, he says, "Dr. Harris and Mr. J. Buel may, in former times, have recommended whitewashing, but it was with reference to destroying insects, without reflecting upon the injury done the trees, or, perhaps, if so, in view of two evils, choose the less." In reply to these remarks, "C. A. L." says, "I hold that it is not empiricism to advocate the utility of whitewashing trees; L. W. may call the late Mr. Downing, Judge Buel, Dr. Harris, Dr. Fitch, &c., 'charlatans' for favoring this practice, but the reader will be at no great loss in determining who best deserves this title." As the question from L. W. fully exonerates him from the charge of his accuser, he entirely concurs in the concluding remark, that the reader will be at no great loss in deciding who deserves, nor in discovering who really wears "the title;" for "by their fruits shall ye know them."

To check the increase of bark-lice, Dr. Harris enumerates the following remedies: birds, internal parasites, minute ichneumon flies, whitewash, potash, or a pickle of salt and water.

A. J. Downing says, "The best wash for the stems and branches of fruit trees, is made by dissolving two pounds of *potash* in two gallons of water. This is applied with a brush—one, and at most, two applications, will rid the stem of trees of the bark-louse, and render it smooth and glossy. It is far more efficacious than whitewashing, as a preservative against the attacks of insects, while it promotes the growth of the tree, and adds to the natural, lively color of the bark."

So much for the condemnation of whitewashing, which gives the trees a repulsive appearance, very unlike that described by Downing.

Dr. Fitch remarking on the remedies for bark-lice, says, "infusion of quassia, tobacco or soap-suds will destroy newly-hatched lice. These and strong lye, potash-water, *whitewash*, dry ashes, sulphur, and I know not how many more articles, *have* been *recommended by different writers*. The *Michigan Farmer* gives a favorable account of the effects of tar and linseed oil beat together and applied warm with a brush, before the buds begin to expand in the spring. The remedy of Esq. Kimball, of Kenosha, is probably one of the most efficacious, and convenient of any; he boils leaf tobacco in strong lye, till it is reduced to an impalpable pulp—and then mixes it with soap, and applies it with a brush." Dr. Fitch does not seem to recommend whitewashing.

These are some of the remedies for the destruction of bark-lice, both natural, as birds and insects, and artificial as the various washes. Only one of these writers directly recommends whitewashing. With all due deference to the opinion of the late Dr. Harris, the whitewashing of fruit trees is becoming unpopular, and will soon be reckoned among the things that were. This is a cheering indication—one, among others, tending to show that improvement is going forth in what pertains to both agriculture and horticulture.

Before planting fruit trees, prepare the soil well by deep and thorough tillage—manure well, select good, healthful trees for transplanting—put lime into the soil,—but do not on the trees,—and with due care and attention, with the application of some simple, harmless wash, like pure water, your trees will grow, flourish and bear fruit in due time. L. W.

MAKE THE MANURE.

Now is the favorable time. The stock has done roaming in the pastures, is sheltered at night, and perhaps during the day, or is allowed, at most, only a part of the pleasant weather in the open yard. At any rate, it is so compact as to bring its droppings into a comparatively small space, where they can be easily collected and incorporated with other matter. How it shall best be kept from waste is a question of importance.

We cannot all have barn cellars just as we wish, nor all the materials we may like, to mingle with the fresh droppings. But much may be done to prevent waste when we have become fully convinced that *there is a depreciation in manure when it is neglected, and consequently a money loss to its owner.* To those who do not believe in loss by evaporation or drenching, our words are but idle utterings—but to those who entertain that belief, a few suggestions may be profitable.

There is no substance within our knowledge which is cheap and abundant, that will absorb and save the liquid portions of manure, and prevent the escape of ammonia, like the muck which is found all over New England, in swamps, meadows, and even in many valleys and uplands. When it has undergone *fermentation*, it greatly resembles pure cow dung, and the best of it is nearly as valuable as the cow dung itself. Most of our farmers have access to this, and we will therefore speak of it first.

Where there are trenches behind the cattle when tied up, it is a good plan to scatter dry muck two or three inches deep, so that it may receive the droppings while they are warm: in this way the muck takes up nearly all the fluid parts, and retains them until the whole is passed through the opening into the cellar, when the process of "cleaning out" mingles the mass more intimately. This, however, *is not enough*,—for when a considerable heap has been accumulated below, if nothing more is done, drainage and evaporation both take place; the gaseous parts speeding their way upwards, and the fluid soaking into the sand or gravel, which compose the bottom of the cellar, or flowing down some channel which they make, perhaps, by their own specific gravity.

Near by the dung-heap there should be a pile of dry and finely pulverized muck, and as often as every other day the droppings should be leveled a little, and then covered to the depth of an inch with muck. When this is carefully done, there will be little or no flavor from the stalls where the cattle are tied, or from the heaps themselves,—a pretty convincing evidence that there is no fermentation going on and no waste by evaporation. The eye must detect whether there is any loss by leaking or drainage. If there should be, a more liberal quantity of the muck must be supplied.

Under this treatment the manure heap will be kept compact and neat, nearly all its valuable properties retained, and when removed, will present a black, exceedingly rich and unctuous paste, that may be cut through with the shovel with ease. In this condition, if *one-half* of the mass is muck, we have no doubt the whole will be worth more per cord than an equal amount of the clear droppings under the ordinary neglect which it suffers.

If muck is not convenient, or cannot be obtained, use loam, or even pure sand.

Good muck, then, demands our first attention, but as all cannot well obtain it, they may avail themselves of other things worthy of especial attention. *Dried Leaves* are excellent, as they are not only valuable as an ingredient for manure, but serve an important purpose as litter or bedding for stock. They may be gathered on many farms at little expense, and will amply repay the cost of collecting and using them.

Sawdust is another article extensively used, and where horses are kept that are not at work,

a coat of this applied once or twice a day, and allowed to remain for weeks or months without disturbing the heap, will prove highly valuable. Much labor of cleaning out will be saved, and the horse will thrive better and his feet keep in a healthier condition than if standing on the dry, hard floor.

Spent tan is another article, and, if fine and old, will answer a better purpose than nothing.

But there are some farms where none of these can be cheaply obtained in quantity, and in such cases they have but one material to which they can resort, and that is the common *loam* of their fields. Where this is the case, we would recommend the same use of it as we have suggested for the meadow mud. On nearly every farm loam may be collected from the side of walls where it has been turned by frequent plowings and left in excess, becoming rather an injury to the farm than a benefit, by encouraging the growth of bushes or rank weeds; or it may be taken from balks or badly managed headlands, or in rich places in pastures or by the roadside. Men who are attentive to the acquisition of manure, this vital interest of the farm, will find a deposit somewhere, which will enable them to increase their winter heaps, and consequently their annual crops.

We cannot suggest anything to the farmer which will be of so much real service to him, as to induce him, if we can, *to give more attention to the saving and increasing his stock of manures.*

EXTRACTS AND REPLIES.

HAY CAPS.

Wishing to procure some hay-caps for another summer, I would like to inquire whether those made without any paint answer as good purpose? Will those who have given them a fair trial, state the result, with any other suggestions from their own experience, which may occur, as likely to benefit a tyro? WM. F. BASSETT.

Ashfield, Dec., 1857.

REMARKS.—We have used hap-caps for several years, and have no more doubt about the *economy of such use* than we have about the economy of cutting the grass after it is grown, or of cocking it after it is cut. The abuse which has been heaped upon the use of hay-caps is like that bestowed upon keeping manure under cover, or of gradual deep plowing, and springs from those miserable prejudices which some cling to as to life itself. Some of these persons stoutly aver that a piece of cotton cloth is no sort of protection to hay, that it will become wet through in a few moments, and yet they may be seen plodding about with an old cotton umbrella over them for hours together, with their heads as innocent of rain as they are of fairness and observation. There are few men but have had an opportunity of *seeing the effects of hay-caps with their own eyes*, if they would but open them and look. A set of thirty hay-caps will more than pay for themselves in a single summer such as the last was, on a farm where twenty tons of hay is cut.

An excellent hay-cap may be made of *four* yards of twilled cotton cloth, a yard wide, by sewing two breadths together, which will give a cap six feet square, and that is sufficiently large to be handled comfortably. They should be well hemmed, and each corner turned over about one inch and sewed down; into these twine should be tied to form loops for the pegs. The pegs may be made of white pine, and should be at least fifteen inches long, and whittled out smooth and sharp at one end.

Such caps need no paint, and when placed on a cock of hay that is made up tall and peaked at the top, and the side well raked down, will almost entirely protect it from a rain-storm of three or four days; and we have known hay and grain kept quite dry with such a cap, when the storm had continued for *seven* days!

We have little sympathy with those who rail against the introduction of everything brought upon the farm, that was *not there* fifty years ago; but we have considerable for the animals under their care who are to subsist upon their fodder. "I object!" seems to be as natural to some persons as the breath of their nostrils; they do not stop to investigate, but as they *feel like objecting*, out it comes, "I object!"

Well, every weed, however useless it may seem to us, undoubtedly *has* its use, and serves some good purpose, though it may be hidden from our view—and these objectors may stand in the same category—so we will try to believe that some valuable lesson may be drawn from their *objections*, and exert ourselves to find out what it is.

We hope the arguments *against* the use of hay-caps will be urged upon our correspondent, as well as those in favor of them.

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FEEDING STOCK.

Will you inform me of the best method of keeping stock during the winter? I find that people differ in the number of times it should be fed daily; some feeding only three times, while others feed five and six times. J. L. B.

Royalston, Nov., 1857.

REMARKS.—In order to use hay of inferior quality, we use a little grain of some kind, cob-meal, oat-meal, cotton-seed meal or shorts, mixed with the cut hay, and then we feed only three times each day. When long hay is fed out, the cattle receive it early in the morning, small fodderings at a time, and as much as they will eat readily for the space of an hour and a half, and

so again at noon and at night. In this way the cattle are kept grinding some five hours. We have no doubt that it is an economical plan to cut the hay, and that twenty dollars' worth of hay and five dollars' worth of meal of some kind, are worth considerable more than twenty-five dollars' worth of hay alone.

Perhaps some gentleman with more accurate information than we possess, will give facts in relation to the matter.

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BAKE THE UNDER CRUST.

Pies are rendered unhealthy and indigestible, frequently, because the under pastry is not baked enough. The under crust may be first baked. The pastry for the bottom of the pie may be put into the pie or baking plate, and after it is baked, the contents of a pie can be put in and baked; or after the pie is baked, in the usual mode, if the under paste is unbaked, the pie can be removed from its platter and placed upon a paper within the oven again.

Iron baking platters, with handles to them, would be economical and convenient for putting into and removing pies from the oven. P.

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COVERING FOR FLAT-ROOFED HOUSES.

A subscriber wishes to know what is the best and cheapest material for covering flat-roofed houses. Will somebody tell him through our columns?

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ELDERBERRY WINE.

FRIEND BROWN:—Will you accept a sample of Elderberry Wine, which was furnished me particularly for you? It was made by ENOCH BANCROFT, of Granville, three years since.

FRANCIS BREWER.

Springfield, Mass., 1857.

REMARKS.—Yes, sir, and drink your health in it too. It is excellent wine, and must be a fine cordial for the sick.

OUR NEW YEAR'S DRESS.

We suppose most of our readers will notice and admire the handsome new dress which the *Farmer* has put on; but if they no not, it is not strange, for our old suit was scarcely half worn out. We at first feared we might be thought a little extravagant, considering the hard times, and the respectable condition of the old suit; but it is a pity that any of our subscribers should be left in doubt and perplexity as to the cause of the clear, sharp and beautiful impression of our type, and the generally improved appearance of our journal, and we have therefore concluded to confess the truth, and throw ourselves upon our readers' indulgence, if they think we pay too much regard to appearances. We are aware that every body despises the empty-headed fop, but then we believe all sensible people admit that a neat, simple and elegant style of dress always becomes a man of solid sense. (This, of course, by way of extenuation, and not of "brag.")

Our outfit is from the Boston Type Foundry, JOHN K. ROGERS & Co., Proprietors, and we think it does great credit to that establishment.

THE HUBBARD SQUASH.—We have received from Mr. GREGORY, of Marblehead, two of these squashes of his raising; but as we had raised several from seed he sent us, we passed these two into other hands. One gentleman reports that "he never knew what the best squash was before." Others, who tried them, say they excel in flavor and in the fineness of the flesh, any squash they had ever tasted. This is our own opinion. Mr. Gregory has advertised some of the seed as for sale. See another column. He raised them at the rate of *five and a half tons of marketable squashes* per acre.

BOYS' DEPARTMENT.

TRUE MANLINESS.

Children are very apt to suppose, that what is manly or womanly can be cut out of cloth or leather; in other words, that clothes, made in the fashion of those worn by men and women, will give some additional consequence to the young who wear them. I know a very little boy, who took great satisfaction in having loops sewed to his socks, so that he might draw them on as boots are drawn; and the eargerness so commonly displayed by children still young, to assume the coat, the cravat, boots, etc., is hardly less childish.—Thus they show their childishness in their attempts to be manly.

This, however, would be a matter of very little consequence, if they were not apt to lose sight, in this way, of the essential attributes of manliness. To be manly is to "dare to *do*," not to *wear*, "all that may become a man." I will give you my idea of what it is for a boy to be manly, by two or three illustrations.

A boy of six years old was required by his father to bring the cows home every night. One dark, rainy evening, in the autumn, just as the family had settled themselves to their accustomed occupations, about a bright, cheerful fire, the father asked:

"Did you bring the cows home, my son?"

"Yes, father," he replied; adding, after a moment's hesitation, "but I did not put up the bars."

"Then go directly back again and put them up."

It was manly in this boy to confess his omission, at the expense, which he foresaw, of a dismal trudge through the rain and darkness to repair it.

I know another boy, of nine years old, who mounted one day in his father's yard a very spirited horse, and was thrown almost immediately. His father stood by looking through a window, but did not interfere, when he saw his son preparing to amount a second time. He was thrown a second time.

"Thrown again, my boy?" he exclaimed.

"Yes, sir; but I'll conquer him yet."

A third time the boy mounted, and then made good his word, the horse yielding to him completely.

This was a manly boy.

Of another, twelve years old, it was told me, that being at a large school in one of our cities, he was visited in his room by two young men, half-a-dozen years older than himself, who used very profane language. After hearing for some time what was highly offensive to him, he said, "Gentlemen must be so good as to abstain from this language, or leave the room." They submitted to the rebuke and remained. This was a still higher kind of manliness.

It was true of another boy, not so old as this, who had long been afflicted with a diseased and helpless leg, that being told, one Sabbath morning, of the surgeon's decision to amputate it, he said, "Then I will have it done immediately, before mother comes home from church, that she need not know anything about it;" and it was done immediately.

If you consider these as fair illustrations of my subject, you will admit that the manliness exhibited by these boys could in no case have been enhanced by any fashion of garments.

I beg you to observe, that the terms, man and woman, manly and womanly, in their proper and full import, convey far more than those of gentleman and lady, gentlemanly and ladylike. A true man and a true woman will be gentlemanly and ladylike, and a great deal more besides.—There are men, and there are so-called gentlemen, who have little or nothing that is manly about them.

MORAL TONE OF A SCHOOL.

The Rev. J. P. Norris, Queen Victoria's Inspector of Schools, on the moral tone of a school, says:—"The value of a school, after all, does not depend on the branches of learning that are studied in it—no, nor upon *the life that is lived in it.* Unhappily for many of those who write and speak about education, this is a truth of which the full force can be comprehended by none but those who are spending days and years of their lives within the four walls of a school. Once in a report addressed to your lordships I endeavored to explain to teachers what I meant when I spoke to them of the *moral tone* of their schools. Six years have passed since that Report was written, and I cannot say that I find it easier now than I did then to define exactly wherein this most subtle quality of the school resides. But this I know, that the longer one lives in a school, or rather, the more one's life is spent in passing through a great variety of schools, the more sensitive one becomes to this their most important characteristic. Spend an hour or two in one school, and you feel all the while as a man fells who is confronted for some time with a bad countenance. Go into another, and all is right and healthy again. and even before you inquire what branches of education are taught you are convinced that it cannot but be well for children to spend their days in so bright and wholesome an atmosphere. Whatever be the value or direction of the intellectual teaching, there is heart and love and healthy moral influence at work, and therein lies the real education on which the after-man and after-woman depends. It is surely this that Milton had in view when he said that the end of education was "to repair the ruins of our first parents, by regaining to know God aright, and out of that knowledge to love him, to imitate him, to be like him."

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

WISCONSIN FRUIT-CAKE.—Three-quarters of a pound of raw salt fat pork, chopped very fine; then pour on a pint of boiling water, one cup of sugar, two of molasses, two teaspoonfuls of cloves, one of cinnamon, one nutmeg, two teaspoons of saleratus, one pound and a half of raisins, also a citron and currants if liked, and flour as stiff as can be stirred; bake very slowly an hour, or longer if necessary, as it will burn without great care. This will make three loaves, and will keep well.

GINGER SNAPS.—Two cups of molasses, one of lard, a tablespoon of ginger, a tablespoon of saleratus, dissolved in as little hot water as possible; flour; roll very thin.

SODA JELLY-CAKE (delicious.)—One teacup of sweet cream, two of sugar, two eggs, half a teaspoon of soda, one of cream of tartar stirred in the flour; flour to the consistence of butter cakes; bake immediately.

TEA-CAKES.—One cup of butter, two of sugar; beat together; one cup of sour milk or water, a teaspoonful of saleratus; spice with nutmeg or caraway; flour to roll out; mix as soft as possible.

SAGO PUDDING.—Wash a teacupful of sago; put it in your pudding dish, and pour on a quart of boiling water, stirring all the time; put in a little salt and a tablespoon of sugar. The longer it stands thus before baking, the better. Bake slowly an hour. Eaten with sugar and butter stirred together.

FOR A BURN.—Raw cotton, flour and sweet oil, applied immediately, is the best remedy I ever saw tried. Rub on the flour first, then the oil, and lastly bind a quantity of cotton.—*Godey's Lady's Book.*

ONIONS.—I perceive that Senator Hale objects to onions on account of the unpleasant odor which they communicate to the breath. If he will swallow a little vinegar after eating, it will remove the cause of his objection. What is much better in this case, is a few kernels of burnt coffee, taken immediately after eating. It will effectually remedy the evil spoken of.—*Granite State Farmer.*

TO KEEP PART OF A BOTTLE OF PORTER OR ALE BRISK.—Put in the cork firmly, and set the cork end downwards, in a tumbler, or other vessel, nearly full of water.

DELICATE CAKE.—Stir to a cream a pound of powdered white sugar, seven ounces of butter; then add the whites of sixteen eggs, beaten to a stiff froth, half a nutmeg, or a teaspoonful of rose-water, or lemon; stir in gradually a pound of sifted flour; bake the cake immediately; the yolks can be used for custards.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, FEBRUARY, 1858. NO. 2.

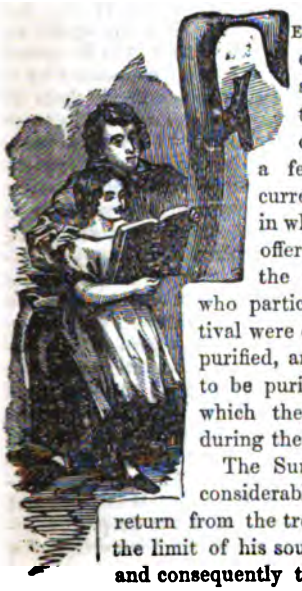
JOEL NOURSE, PROPRIETOR.
OFFICE...13 COMMERCIAL ST.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

FEBRUARY.

"When the days begin to lengthen,
Then the cold begins to strengthen."



FEBRUARIUS was given as a name to the second month in the Roman Calendar, from *Februa*, a festival which occurred in this month, in which sacrifices were offered to the manes of the departed. Those who participated in this festival were called Februati, or purified, and were supposed to be purified from the sins which they had committed during the previous year.

The Sun has now made considerable progress in his return from the tropic of Capricorn, the limit of his southern declination, and consequently the days have become proportionably longer. Yet we often have the coldest days of winter in February. The snow and ice have accumulated in the northern regions. The waters of the ocean have become cooled down to the lowest point. The currents of the atmosphere, in passing over these regions, are deprived of the caloric which they bore from the regions of the south, and reach the eastern shores of our continent loaded with sharp particles of frozen vapor, which penetrate the warmest clothing, and pierce to the very bones. This region is

"The armory of Winter, where his troops,
The gloomy clouds, find weapons, arrowy sleet,
Skin-piercing volley, blossom-bruising hail,
And snow, that often blinds the traveller's course,
And wraps him in an unexpected tomb."

FEBRUARY is the month of winds and drifting snows. The snow is borne by the winds from the hills and level plains, and heaped in deep masses in the valleys and highways, by the fences and walls, and in the deep cuttings of the railways.

——"From the bellowing east,
In this dire season of the whirlwind's wing,
Sweeps up the burden of whole wintry plains
At one wide waft, and o'er the hapless flocks,
Hid in the hollow of two neighboring hills,
The billowy tempest whelms; till upward urged,
The valley to a shiny mountain swells,
Tipped with a wreath high curling to the sky."

This description sheds light rather upon English modes of farming than ours, for the "whirlwind's wing" would rarely "sweep up the burden of whole wintry plains," on our "hapless flocks," for they are not trusted in "the hollow of two neighboring hills," at this inclement season. We find warm barns economical, and *cannot afford* to do without them.

And now comes the labor of breaking out the roads and removing the obstructions in the way of the traveller. This is often very severe work, and has to be repeated sometimes every day in certain places. But the snow plow, the shovel and the patient ox do their work. They never give over till it is accomplished. We have often been surprised to see how soon the highways in New England, when filled to a level with the walls, are rendered passable, and how soon the rail cars are again whizzing on the track that was buried many feet under hard driven snows. The snow shoes which bore the aborigines and our forefathers over the pathless fields and through the forests, are now rarely seen. Now the gaily painted sleigh is out, and the merry bells are heard in every direction. The people at this season have become accustomed to the cold, and wrapped in woollens and furs, they defy its power, and fearlessly face the cutting winds and driving snows.

Now that the days are longer, the farmers are hauling home their year's stock of firewood, and the timber for rails and posts, and the board logs

to the mill. The prudent farmer has cut the wood and piled it in the woods in December and the early part of January, before the snow became so deep as to impede his labor. Get up a good pile, brothers, an ample supply, so that you may have dry wood all the year, and cut and split and pile it up neatly, as soon as the sledding fails in March. This is one of the hardest tasks which our climate demands of us. But it must be done. See that it is done in season, for there is no economy in burning green wood. How much more happy and comfortable the good wife feels, than when she has to burn green, snowy wood, and spend half her time tucking under chips and scrawls, and puffing away with the bellows in the vain attempt to coax it into a flame. If you would have a sweet-tempered wife, and one who will aid you with a hearty good will, never compel her to use green wood, and be careful, too, that it is well split. Many farmers contend that wood will go farther in large clefts. But this arises generally, we apprehend, from an indisposition to make it smaller. Large wood, in these days of cooking stoves, is an abomination to the women. It will do to burn a part of it large in cold weather or in the open fire-place. But in warm weather it should be split fine, that it may kindle quick and make a quick fire. This will not only make the wife pleasant, but will save wood enough to pay for the extra labor of preparing it.

The teeming cows and ewes now want a little extra attention. A few nubbins of corn, or a mess of roots daily, will keep them in good health and spirits. Take special care that they are kept warm and well protected from the driving winds. Never permit them to strain themselves by wallowing through the snow drifts. In short, a proper attention to them now will be amply repaid by the better condition of both themselves and their offspring.

Candlemas day occurs on the 22d of this month, and we trust you remember the destich,

"Candlemas day,
Half your meat and half your hay."

These old rhymes and saws often contain a wholesome truth packed into a small compass, like a meat in a nut-shell. This, we think, is one of that sort. How is it, brother farmers? Is half your winter's store yet unexpended? If so, we trust that both your families and your stock will come out in the spring hale and hearty, prepared to resume with renewed energy the labors of the year.

THE FARMERS OF WISCONSIN IN A TIGHT PLACE.—One of the plans for building railroads in Wisconsin, has been to induce the farmers along the route of a road to be built, to mortgage their farms to the railroad company, and then the company sells the mortgages to raise the money, guaranteeing to pay the interest and the amount of the mortgage when due.

It is said that from 2000 to 3000 farms are thus mortgaged to railroads in Wisconsin; that the railroads cannot pay, and to release their farms will strip nine-tenths of them of the hard earnings of many years.

THE OWNER OF THE SOIL.

The man who stands upon his own soil, who feels that by the laws of the land in which he lives—by the law of civilized nations—he is the rightful and exclusive owner of the land he tills, is by the constitution of our nature under a wholesome influence not easily imbibed by any other source. He feels, other things being equal, more strongly than another, the character of a man as the lord of the inanimate world. Of this great and wonderful sphere which, fashioned by the hand of God, and upheld by His power, is rolling through the heavens, a part is his—his from the centre to the sky. It is the space on which the generations before moved in its round of duties, and he feels himself connected by a link with those who follow him, and to whom he is to transmit a home. Perhaps a farm has come down to him from his fathers. They have gone to their last home! but he can trace their footsteps over the scenes of his daily labors. The roof which shelters him was reared by those to whom he owes his being. Some interesting domestic tradition is connected with every enclosure. The favorite fruit tree was planted by his father's hand. He sported in boyhood beside the brook which still winds through the meadow. Through the field lies the path to the village school of earlier days. He still hears from the window the voice of the Sabbath bell which called his father to the house of God; and near at hand is the spot where his parents laid down to rest, and where, when his time has come, he shall be laid by his children. These are the feelings of the owner of the soil. Words cannot paint them; they flow out of the deepest fountains of the heart; they are the life-spring of a fresh, healthy and generous national character.—*Edward Everett.*

For the New England Farmer.

INDIAN CORN.

When Father Allen, of P., reported more than one hundred bushels of Indian corn grown to the acre in Plymouth county, I thought there must be some humbuggery about the statement, because our best lands never yield this amount, actual measure. On inquiry, I learned that 75 pounds of green ears were reckoned to make one bushel. Now, instead of 75 pounds, 85 pounds is assumed to make a bushel. Adopting this estimate, the Supervisor of the County reports many acres as exceeding one hundred bushels each, and one acre as high as 123½ bushels.

Can it be that such crops are grown on the shallow soil of the Cape? If so, they understand better how to manage their lands, than do the farmers of the interior. I should like to see some of their crops in the field. P.

Dec. 5th, 1857.

GREEN CROPS FOR MANURE.

I am much gratified to notice the increased attention which is being accorded by farmers generally to this subject. Every one, in fact, who examines this subject attentively, must be speedily convinced of its utility, especially when turned in as an enrichment of exhausted soils. There is obviously no method of which the agriculturist can economize more, or more rapidly increase the fertility of the soil, than by turning in, as a dressing, such crops as derive a portion of their aliment from the air. No matter how impoverished or sterile the soil, he may, by a judicious and persistent pursuit of this means of amelioration, easily make it rich. There are many plants well adapted to this purpose, among which are millet, buckwheat, peas and clover, all of which are highly valuable, operating both mechanically and chemically, by their decomposition upon the soil, especially when containing much acid.

But it may not be improper here to remark that in making choice of crops to be turned in, we should invariably give preference to such as derive at least a portion of their pabulum from the air. The vegetables enumerated above, are all of this class, and consequently take much less from the staple of the soil, than those which are of course less adapted to this use. Of these, buckwheat and clover are perhaps the most valuable—the haulm being more vigorous, and at the same time much more succulent, and yielding much more readily to the laws of chemical affinity when inhumed beneath the soil. There is also another cause of preference, particularly in the case of buckwheat, the crisp nature of its stalk contributing greatly to the facility of turning it down, especially where the roller is used to precede the plow. On very poor land, buckwheat may be grown with better success, perhaps, than any other grain crop, and will produce a more abundant yield, both of haulm and grain. When sowed to be turned in—unless the soil is calcareous to a degree rendering it unnecessary, the application of quick lime before turning in the wheat will be of great benefit. From two to three casks will ordinarily suffice for an acre; but if the ameliorating process is designed to prepare the land for the production of crops belonging to the order of lime plants, and which require a large amount of this mineral for their successful development, treble and even quadruple the above quantity may be economically applied. It is not of essential consequence whether the application precedes the turning down of the crop, as is accorded subsequently, the principal object being to supply an important constitutional deficiency to the interests of the operator by limiting the acreable product of the crop.

Clover is preferred by many to all other crops for this purpose, and, taking all things in consideration, it is, perhaps, not easy to say where preference should rest. The quantity of soluble matter contained in the clover plant, when arrived at the period of inflorescence, is unquestionably large,—larger, probably than in most other plants. Its roots, also, when mature, are large and succulent, and contribute very materially to the fertilizing effects of the crop when turned down at maturity; but it will be seen that where a speedy amelioration is required, the plants do not commonly have time to attain their maximum development, and every one is aware that in its youthful state, the clover plant contains a far larger quantity of fluid than of solid matter. Millet, if sowed broadcast, will probably produce a greater quantity of readily soluble matters, than either clover or buckwheat. But whether its fertilizing action upon the soil is so great, is a question that remains to be decided. One thing, however, may be relied on as certain. Any plant produced by the soil, will if turned in by the plow contribute more or less to its enrichment. The families of the puccus, and even the comparatively worthless cryptogamous vegetation, which is produced parasitically on rocks and in boggy swamps, have been ascertained to possess principles favorable to vegetable development, and when reduced by putrefaction, of aiding, very essentially, the phenomena of vegetable life. Nothing, in short, is worthless in the great laboratory of nature, and it is there over the crucible and the alembic, that we receive these important lessons which so materially assist us in the numerous and multiform duties of practical life. Here we discover the adaptation of means to ends, and become familiarized to the operative principles and laws with which we were before perfectly unacquainted, and scarcely deemed to exist.—*Germantown Telegraph.*

CHLOROFORMING BEES.

A Mr. Smith, in a letter to the Edinburgh *Courant*, claims the discovery of the art of chloroforming bees. In describing the process, he says that the quantity of chloroform required for an ordinaay hive, is the sixth part of an ounce; a very large hive may take nearly a quarter of an ounce. His mode of operation is as follows: set down a table opposite to and about four feet distant from the hive; on the table spread a thick linen cloth; in the centre of the table, place a shallow breakfast plate, which, cover with a piece of wire gauze, to prevent the bees from coming in immediate contact with the chloroform. Then quietly and cautiously lift the hive from the board on which it is standing, set it down on the top of the table, keeping the plate in the centre. Cover the hive closely up with a cloth, and in twenty minutes or so, the bees are not only sound asleep, but contrary to what we see, when they are suffocated with sulphur, not one is left among the combs; the whole of them are lying helpless on the table. Then remove what honey you think fit, replace the hive in its old stand, and the bees, as they recover, will return to their domicil. A bright, calm, sunny day is the best, and you should commence your operations in the morning before many of them are abroad. This discovery may be valuable to some people who are not provided with bee hives; but we think that American ingenuity has devised a far better method. Before long, we hope to be able to lay before our readers a system of bee culture which, thus far, has been crowned with complete success.

COUNTY TRANSACTIONS.—We acknowledge our indebtedness to the Hon. *John W. Proctor*, for a copy of the Essex County Agricultural Transactions, and shall be glad to receive a copy from each society.

MARES VERSUS GELDINGS.

Farmers generally do not seem to be fully aware of the benefits which they might derive from the use of mares, instead of geldings. Farm work for horses is comparatively light. It is slow work. They are not necessarily exposed to labor which produces heaves, founder, spavin, broken wind, etc., etc. These are all caused by unnecessary exposure, indulgence in eating and drinking, under unfavorable circumstances, or over-driving; or, by two or more of these causes combined. It is true it is necessary for horses to perform some work upon a farm, which draws severely upon their nature; but, for the most part, farm work is steady, every day work, where horses can be well fed and cared for. Consequently mares are just as good farm workers as geldings.

If such is the fact, we propose to show farmers that they should, for their own benefit, keep mares for farm work instead of geldings. With proper treatment, a good breeding mare will bring a colt every year, without interfering materially with the operations of the farm.

If the necessary pains has been taken to secure the services of the best stallion, the colt will be worth, when a year old, one hundred dollars; and, by the time he is old enough to use, he should be worth two hundred dollars. Well, if the colt is worth one hundred dollars at a year old, and the service of the horse costs twenty dollars, it leaves eighty dollers for the use of the money invested in the mare, as her labor will certainly pay for her keeping. Now, if the mare is worth two hundred dollars, the eighty dollars would pay forty per cent. interest annually upon the investment, which is far better than loaning money at three per cent. a month, as there is, in this case, no usury law for debtors to avail themselves of; and then there is no more risk in the mare than there would be in a gelding, not so much, even, This is only the profit of one year.

The same can be done for a succession of years. And you can just as well keep a span of mares on your farm, and, after two or three years, have a span of fine horses to sell every year, as to keep a lot of stock which will neither increase in number or value.

Now, if you keep geldings, they are not so hardy naturally, we think, and do not live so long, and when once done with work, are of no manner of account to any one, and mercy requires you to knock them on the head. On the contrary, when your mares are advanced somewhat in years, or if they become lame from any cause, you can still, under ordinary circumstances, make them of great service to you by raising colts.

But there are certain kinds of labor to which the gelding is better adapted. They are generally, we think, more fleet, and consequently better fitted for roadsters. They are also possessed of more muscular power, and, consequently, better fitted for heavy draughts.

We could find many purposes to which geldings are better adapted than mares. We would, therefore, advise not only farmers, but all who do not severely task their horses with labor, to keep mares by all means. We would also advise them to obtain the best mares, and the services of the best stallions, as the colts will sell for enough more to doubly pay the trouble and expense. And, besides the profit to the raiser of horses, the community would be benefited by an increase in number, and a decrease in the price of horses, in a few years.

A farmer who keeps only two horses, and both geldings, will be compelled to purchase a team of some one else when his is done with work; whereas, if his team is composed of mares, he is preparing a team to take their places, when they are turned out to take their rest, either on account of old age, or for any other cause.

Farmers should keep as little non-producing stock around them as possible. Everything should be made to pay the best possible per centage, with fair usage. Then, we say to farmers, sell your geldings and purchase mares, and see if our advice is not good in the end.—*Northwestern Far.*

For the New England Farmer.

LITTLE THINGS BY THE WAYSIDE. No. 4.

PUMPKINS FOR MILCH COWS.

It has long been an unsettled question with farmers, whether pumpkins fed to milch cows were actually beneficial. One of the best farmers I know, says they will improve the *quality* but will not increase the *quantity*. After feeding them to his cows for thirty years, he believes them of no essential value in this case, as the cows require even better feed after having been fed with them. That ripe pumpkins are good for fattening stock there is but little doubt, but a small quantity (at least) of corn meal should be used with them for this purpose. The best article I have seen these many years upon the "Management of Milch Cows," is in your weekly of the 28th inst., from the *Genesee Farmer*. Every milkman or farmer should place it upon his memorandum: it is a *volume* in *twenty lines*.

DRIED CORN FODDER

will give milch cows a back set, and should not be fed them when quantity of milk is desirable. Well cured corn fodder will improve the quality, but not in a corresponding ratio to the loss of quantity. This is also true of the "old fogg," or frost bitten grass of this season of the year. Allow them to feed upon it now, and you lose milk.

HILLING CORN

is a matter of which theorists have had much to say, and led many a farmer to disbelieve the well-grounded opinions of his own actual experiments. Our corn crops in New England are grown in about ten weeks, (from the middle of June to the first of September,) and this growth depends almost entirely upon artificial means; that is, manuring, plowing, hoeing. The system of cultivation that advances its growth with the greatest rapidity would seem to be most in accordance with the laws of Natural Philosophy. The application to the roots of vegetable stimulant, light and heat, is the means by which the growth is secured. At every hilling not only the weeds are cut up, which suck up the dews and showers that fall upon the ground, and which are drank in by the thousands of little fibres of roots which the corn stock throws out near the surface to supply it with food and nourishment, but every succeeding hilling induces a new set of roots to

shoot out to strengthen it against the winds, and furnish a new and increased supply of food for the plant. But few persons are aware of the large per centage of nourishment our grain crops receive from the atmosphere around them. Actual experiments have removed every doubt from my mind that a field conducted upon the plan of three or four times plowing and hilling, will stand the drought much better than by flat cultivation, and produce a sufficient increase of corn to pay good wages for the labor done.

EXTREME COLD WEATHER—HORSES.

Persons owning valuable animals are often indifferent to their health and comfort, and on an extreme cold day, in good sleighing, will drive a noble steed ten or twelve miles an hour, thinking because it is cold he may be pressed forward to the extent of his speed, unconscious of the deadly effects of the frost upon the animal. When the horse is at full speed, his lungs are inflated to their fullest capacity, and at every vital breath the paralyzing effects of the frost are carried to every part of the lungs. By the countless number of cells which form the internal structure of these organs is exposed a surface greatly exceeding the whole external surface of the body. The living membrane of these cells has a wonderful absorbent action, by which they suck in the air destined to vivify the blood. When the thermometer is 10° or 20° below zero, the air is so powerfully impregnated with the properties of dissolving acids as to form tubercles in the lobes of the lungs, which result in consumption, or in spasmodic affections attended with fever and inflammation. If the owner is an unobserving man, the animal dies of "Botts;" if his owner is a man of observation, he soon finds his horse is laboring under a violent attack of lung fever, or gradually wearing away in consumption. Philosophize as you will upon thin shoes and wet feet. I believe a large majority of cases of *contracted* consumption in this climate are attributable to an unguarded exposure of the lungs to the extreme cold weather. Barren and unfertile soils are colder than rich and fertile ones in the same latitude, and no doubt the improvement of the soil of New England would not only improve the condition, but the health of our people. A wet and rainy climate, with wet feet attendant, nas more of a tendency to produce a bilious stomach, which results in fever or ague, than to produce consumption.

PICKLES.

Having a desire to keep up with the spirit of the age, and having a good supply of cucumbers the past summer, I tried to make (with the aid of my better half) some good pickles, by the numerous receipts from books and papers, by making a weak brine and pouring it on to the cucumbers hot, two or three times, and then putting them in vinegar. At every trial we have lost three messes of brine, two of vinegar and all the pickles. Those we have put into the vinegar direct from the vines are good.

In my last communication, published in the weekly of Sept. 26th, I gave you a very valuable receipt for "Iron Cement," which your paper says was for filling "cracks and holes in old *bottles*, &c." Whether the mistake was yours or mine I cannot now say. Please give it correct:

IRON CEMENT.

½ teacup of iron filings, ½ teaspoonful of sal amonia, 1 teaspoonful of sulphur. Mix in chamber lye. This will fill cracks in iron kettles or pots, as large as your finger, and in a few days become sound and hard. Many a valuable pot or kettle may be saved in this way. It must be used as soon as made, as it soon becomes hard.

SEASONING FOR SAUSAGES.

1 teaspoonful of pepper, (¾ black and ¼ cayenne) 1½ of salt, 3 of sage pounded fine, to each pound of meat.

EXCELLENT BROWN BREAD.

1 quart new milk, 3 teacups of Indian meal, 2 of rye, ½ teacup of molasses, 1 teaspoonful of salt, 1 of saleratus. Bake 2 hours.

SNOW STORMS.

It may be interesting to many to know the number of snows which fall in this vicinity every winter. The record has been kept in my father's family for upwards of half a century, and in no winter has the number been less than 28 or more than 33. "Squalls" are not counted. Snow enough to "track a cat on a board" is a storm.

LEWIS L. PIERCE.

East Jaffrey, N. H., Nov., 1857.

For the New England Farmer.

ON PURCHASING MANURES.

DEAR EDITOR:—A correspondent of your paper of the 21st of November inquires concerning the economy of purchasing manures. Your reply, that the utility of the thing depends on circumstances, is a very proper one. For if market gardening can be made an object, and the produce of the land comes in quick returns of cash, at the prices that garden produce brings in cities and large villages, we do not doubt that it will pay to purchase manures at present prices. But where it is to be applied to lands occupied in the ordinary purposes of agriculture, where the market is in the future, and the prices liable to fluctuation, we much question whether such purchases are profitable investments.

The manure that is thrown into market, is generally found at livery stables, or at places where many horses are kept, and their owner has not grounds on which to bestow it, and where, too, much grain or meal is fed to the animals. We know that the latter circumstance is considered commendatory of the article. Under certain circumstances it probably would be. For instance, if the farmer purchaser could have the control of the heap through the accumulating process, and give occasional mixtures of gypsum, or even muck or common soil, to arrest the gases that pass off in the rapid fermentation to which such manure is subject, the first quality of the manure might be retained, and the quantity increased. But the system of management pursued by the stable-men is very different from this. Their first object is to get it out of the way, it may be, by throwing it under the eaves of the building, where it is subject to enormous drenchings, or, on a hill-side from which its richest qualities are washed away; either course rapidly dissipating its value. At any rate, it is thrown into piles,

and the piles heat and sweat excessively, from the very nature of the material of which they are composed. Much of its goodness is actually burned, and dissipated by the smoke so often seen rising from such heaps, and when they are opened to remove, the effects of the recent heat are unmistakably visible, so that, at the time of removal, it is a mistaken calculation that supposes, all particulars included, it is worth as much, load for load, as the simpler formed manure of the farmer's yard and stables. The effect may, like that of all heating and rapidly decomposing manures, be more marked; it is certainly soonest over.

The usual price, in this region, for such manures, is $1 a load, to which the cost of hauling is to be added. This will bring it to from $1,25, to $1,50 a load, delivered Now the most moderate quantity to be put on an acre, would be ten loads, which in first cost is ten dollars, and to add the lowest price of hauling, would be $12,50. Then the question comes, does it increase the value of the crop to that amount? This, as before stated, depends upon circumstances. In our observation, the effect of these quick working mannres is mostly shown the first year.

Now let us take the muck hole. To every farmer who is blessed with one on his premises, the first cost is the mere cost of the land, which taken by the load, is a mere nothing. Cartage of this, as well as of other things, depends on the price of labor, and will vary in different localities, so we let those interested fix it to suit themselves. But in this muck, the farmer has a vast amount of vegetable matter, the accumulation of years, and in every stage of decomposition. It is just the thing he needs; one of the principal ingredients of soil which frequent croppings have taken from his land. The only objection to its present use, is, that in accumulating in a cold, wet swamp hole, it has become itself so cold and sour, that its power of successful action is diminished. It needs bringing on to the dryer lands where the action of the atmosphere, frost, and sunshine will in due time dissipate this unwholesome quality, and prepare it to become the healthy food of plants. If lime or even ashes are applied, a moderate quantity to each load, they will hasten the neutralization of the acid, and increase the value of the raw material. If occasionally turned so as to expose new surfaces to the atmosphere, its preparation may be hastened, but when business will not admit of this, it will, in due time, prepare itself; for instance, if a bed of it is formed in spring, it will do for top dressing in autumn, or if hauled out in early autumn, it may be made fit for spring use.

Muck may be prepared for use by throwing it into hog or barn yards, where, by its absorbent powers, it will take up the juices which would otherwise evaporate, and retain them for the soil. When mixed half and half with barn-yard manure, the qualities of each for most purposes are much improved, so that a farmer who has fifty loads of barn manure, may make a hundred of it by mixing muck in a like quantity. If a bushel of gypsum to each ten of manure, or even a less quantity, is mixed, so much the better.

For top dressing grass lands, these composts are better than clear manure, for the combination with the muck prevents evaporation, and the slow decomposing qualities of the muck enable it to give out the strength, as the plant requires it for food. For grain crops, we have found it excellent. If the first effect is not so great, it lasts much longer than animal manure, and makes the land clear of all weeds. For fruit trees and gardens, it is just the thing. For potatoes, it is far preferable to more heating manures, which greatly facilitate the progress of the rot.

Since writing the foregoing, I have learned from an intelligent farmer, who makes much use of muck, that his estimated cost of manufacturing it into a valuable compost is not to exceed fifty cents a load. Farmers can decide which is cheapest then, this or stable manure, always to be hauled some distance, for a dollar a load. But in order to come at the whole truth in the matter, let them apply a load of each side by side, and mark the result by taking first cost and last profit into the account. W. B.

Richmond, Mass., Nov. 26, 1857.

WINTERING MILCH COWS.

A word on feeding cows for milk and butter. I have experimented for the last five years upon different kinds of dry feed—corn, barley, oat and buckwheat meal, fine and coarse middlings, shorts and bran, wet—with cut straw, hay and stalks. My cows give more milk and make more butter, from corn meal, wet, with cut straw, than any other food, by from one-third to one-half. It will not do to feed hay or stalks at the same time—it fattens the cows too much. Try four quarts of meal and one bushel of straw per day—that is, two quarts morning and night—the straw at noon; they will gain in flesh at that. It is true, as you have remarked, that "corn meal is bad for milk," if it is fed with hay or stalks. Two quarts fed with hay or stalks is first-rate for other cattle, or the same amount on straw is cheaper and better than hay and stalks without the meal. Stabling is indispensable in the above feeding.—S. B. BANVARD, *Livonia, N. Y., in Rural New-Yorker.*

REMARKS.—We give the above, not to endorse it entirely, but for the suggestions it contains in regard to some points. *Four* quarts of pure meal per day would be very high feed, and more than would probably be returned, at present prices of milk. Will Mr. Banvard's views about the straw be sustained by others? If they can be, they are very important.

For the New England Farmer.

AGRICULTURAL ADDRESSES.

I have noticed some cavils of late, at the appointment of persons to make these, who were not what is called *practical farmers*, but who are employed much of the time in some other pursuit. I am one of that number, who think it no valid objection to an orator, because he knows something else besides the particular subject on which he is called to speak—on the contrary, it would be a serious objection if he did not understand other subjects. Who will say that Pickering, Abbott and Eaton, who nearly forty years

ago led off in their addresses to the farmers of Essex county, were not competent to teach the farmers what was best to be done on their farms? Who will presume to say that Henry Colman was not fit to make an address to farmers?—Those who cavil in this manner are wise without knowledge, not understanding what they say. Farmers should rejoice that other professions are ready and able to lend a helping hand. Some of the best agricultural teachings we have ever known have come from those who gave attention to other things besides farming. The truth is, no man is fit to teach others, who has limited his inquiries to one subject alone. Such direction of the attention has a tendency to contract and narrow the faculties—and as was said of Burke, to induce "the giving up to party, what was meant for mankind." ESSEX.

November 30, 1857.

For the New England Farmer.

THE CROW.

MR. EDITOR:—Noticing a piece in the *N. E. Farmer* with the above caption, I thought I would give you my experience with the crow the present year. I broke a small piece of land of just 100 rods, manured in the hill and planted with corn. As soon as it was planted I put a line all around it. About the time the corn made its appearance, I put up two images on either end of the field. The corn came up and stood finely. The crows came on and pulled up about 700 hills, as I estimated, and I planted it over again with corn. The newly planted corn soon came up, and with it came the crows. I then put up one or two young crows attached with a string to a pole, also shingles and a bell attached to a shingle so as to ring with the least wind, and still they came on. I then took sulphur and ashes, mixed, and put on each hill; this they did not like for a day or two, but then came again. I sowed dry corn about the field, but to no purpose. I put on a steel trap and fish hooks, baited with chaff and corn, but it did no good. I then built a small house of boards, large enough for a man to get into with a gun, and placed it close by the field; then with a man in it, they would come within a few rods of it, and if fired at, they would fly a short distance, but would return in one hour.

After all the above had been done, they took about two-thirds of the field clean. I then thought I would hoe the remainder; I did so, (as they worked on the end opposite the bell first,) and in less than one week they took *that*, every hill; there was not a whole hill upon the field; leaving only some ten or twelve scattering stalks. It was then too late for corn or beans, and I sowed it with buckwheat. I had another piece of about three-fourths of an acre, which was lined when it was first planted, and had six or ten crows hung about upon it, and flags, windmills, &c. &c., and they would come and pull up corn within one foot of them all, and they destroyed about two-thirds of this piece.

If my friend, "A Subscriber," doubts the above statement, I can prove it to be true, and I think when he gets "crowed" as badly as I did, he will cry let the crow die. YOUNG FARMER.

North Charlestown, N. H., Dec. 7, 1857.

For the New England Farmer.

HEIFERS AND HEIFER CALVES.

MR. EDITOR:—I was gratified to see so many fine heifers and heifer calves on exhibition, at the annual cattle show at Concord on the 29th of September, and learn with much satisfaction that the number exhibited at many other cattle shows in the State was unusually large. This fact shows that the farmers of our State have taken hold in earnest of the work of raising their own milch cows, and affords greater promise of improvement in our stock than any other fact that has come to my knowledge. Our farmers, especially in the eastern part of the State, aim to produce good milkers, rather than stock for the butcher. Hence it is desirable to be able to determine, at as early a period as possible, the properties that denote good milkers, that such animals only as possess these properties may be raised. Those whose points indicate only a large growth and early fattening, may be more profitably raised at a greater distance from the milk market.

There are three things which appear to me essential to success in raising good milking stock. These I will briefly point out.

First;—raise only those calves whose mothers are good milkers, and belong to good milking families. Be very careful, also, that the sires belong to good milking families. In order that the properties of an animal may be inherited by its offspring with any degree of certainty, it is not sufficient that they should be possessed by the individual parent. This may be accidental. They must be established as the permanent properties of the family or breed to which it belongs. So long as farmers purchase from drovers those heifers and young cows on which they depend for milkers, they cannot be sure that the progeny of those even that prove good milkers, will inherit the same character. But a calf that has sprung from several successive generations of good milkers, may be relied upon with a good degree of certainty.

In the second place, good milch cows possess certain physical marks or characteristics, which, although not absolutely certain indications, should never be neglected. These marks are well known to all observing men, and may be seen in the calf, at least the most prominent of them, at an early period. I think no farmer wishing to obtain a good milker, would raise a calf with a large head and short muzzle, large, thick neck, full, high shoulders, large legs, thick tail and coarse hair. He would rather select one with a small head and long muzzle, bright eyes, thin, tapering neck, small legs, large hind quarters, long, slim tail, soft skin and fine hair. Guenon and Haxton affirm that the form and size of the escutcheon, upon which they greatly rely, in determining the character of the cow, may be ascertained in the calf—that it is not fully developed, only because the parts on which it is placed are not fully developed at this period of life—but that a careful examination will reveal its true character. Now, although there are apparent exceptions to Guenon's rules, yet I believe that most good milkers possess the marks which he points out. If these marks can be ascertained in the calf, they will afford a guide of no small value, in determining what heifer calves to raise, and what to send to

the butcher. This whole subject deserves more attention than it has received.

The third thing to be attended to, is the treatment which calves and heifers should receive before they come to milk. When taken from the cow, they should be provided with food suited to their condition and health; they should be taught to eat a variety of food, and should have a good supply of pure water. Calves need a large quantity of drink, and it is desirable that they should get the habit of drinking freely, as this is essential to free milkers.

They should be treated with the utmost kindness and gentleness, and never teased, or beaten, or frightened, but should be frequently handled and accustomed to the utmost familiarity. As they grow older this habit of confidence in their keepers should be encouraged and cherished. They should be protected from the cold and from storms. Their skins should be kept clean and free from vermin. In short, such a course of feeding and training should be pursued, as will steadily develop their growth and strength, and preserve them in vigorous health and in a comfortable, contented condition.

A half-starved, stunted, lousy calf, shivering in a cold storm, is one of the most pitiable objects that can be seen, and is a disgrace to any farm; and the owner of such a calf does not deserve to have a good cow, and is in a fair way to realize his deserts. The subject of raising our own milch cows is one of great importance, and many more suggestions might be made with regard to it. But I think that in those above made may be found several hints that will contribute essentially to the success of those about to engage in this business. J. R.

Concord, Dec. 10, 1857.

PREPARATION OF TRIPE.

I am aware that tripe is a subject which few persons have much sympathy with, or relish for; and as to the idea of using it as an article of food, that it is utterly repugnant to their tastes; yet the idea of its being unfit for food, I think, is wholly imaginary, for the individuals who discard it have no compunctions about eating a piece of broiled liver—the heart when boiled, and served up cold, or made into mince pies, is excellent—and a cold tongue is considered a choice morsel. The reason why tripe is generally rejected, is because it is one of the inner parts of the beef; and the filthy manner in which it is often treated, is enough to make it repulsive to any one. Yet most persons, when a dish of tripe that has been carefully cured and well cooked, is set before them, eat it and call it excellent. The same objection might be made against the other parts mentioned, and with equal propriety. I contend that if proper care is used in preparing and cooking tripe, it is just as clean, healthy and nourishing, as any other part of the beef. It is presumed that most farmers who fat and kill their own beef, throw away the tripe because of their ignorance of how to clean and prepare it.

The following method of cleaning and preparing tripe, I have tried successfully, and prefer to any other way that I know of. When the paunch is taken from the beef, care is used to keep it clean, and as soon as it is emptied, it is washed in clean water till it is clean; if it is cold weather, it is put into warm water, and soaked a short time, when it is cleansed in this way: Have a kettle of boiling water ready; take the tripe and cut it into pieces small enough to handle conveniently; then take a piece and hold it in the water till it is scalded, so that the skin will start, when it should be laid on a table, and scraped with a knife till it is thoroughly clean; proceed in this way till it is all cleaned. It should then be put into cold water, and remain a week, the water being changed every day.

It should then be boiled till it is so tender that a straw can be run through it easily. While it is boiling, a small quantity of saleratus should be put into the water, for the purpose of sweetening it, and to make it tender. After it is cooked, it can be pickled to suit the taste of those who use it.

In this way, it may be prepared in a way which, if suitably cooked, will make a dish of food equal in every respect to any part of the beef.—*Country Gentleman.*

For the New England Farmer.

DIGGING ROCKS AND LAYING WALL MADE EASY.

MR. EDITOR:—Being in Rochester, (Plymouth Co.,) a few days since, I had occasion to call on Thomas Ellis, Esq., of that town, who gave me a polite invitation to ride with him over to his brother's, to witness the operation of a machine for digging and laying large rocks into a wall. The field of operations was on the farm of Jarvis Ellis, in the west part of Rochester, near Fairhaven. The machine will take out a rock weighing full six tons, that lies level with the surface of the earth, only removing a few shovels full around it so as to make a slight indentation on the sides with a hand-drill, sufficient to receive the ends of the camhooks, when the rock is easily raised by oxen or horse as the case may be, and can be hauled if desired, and dropped on the foundation or line of the wall. After getting two or more of these on to the line, they hitch on to one weighing about three tons, which is easily dropped on to the other, so as to break joints. It may be asked, why lay so heavy a wall? The answer is, that Mr. J. Ellis's land abounds with such stones, and being a believer in horse-rakes and mowing-machines, he wishes to remove all incumbrances, so that they "can have full course and run."

From one hundred to one hundred and fifty large rocks can be dug and dropped on to the ground near by, in a day. The machine was invented by Mr. Seth Bolles, of the same town, who has sold a part of his interest to Mr. T. Ellis. The patentee's price is two hundred and seventy-five dollars. One or two will be sufficient for any town. It is designed to have a good cut of the same, published in the *Farmer*, if the neccessary arrangements can be made. The proprietors would be happy to answer any letters of inquiry that may be sent them. F.

Framingham, Dec. 1, 1857.

REMARKS.—Let us see the "cut" and description.

FONDANTE D'AUTOMNE, OR BELLE LUCRATIVE.

We present the reader, in this number of our journal, with one of the most beautiful, as well as one of the best, pears that grows. The late Mr. DOWNING, in his work on fruits, says: "If we were asked which are the two *highest* flavored pears known in this country, we should not hesitate to name the Seckel, and the Fondante d'Automne *(Autumn melting.)* It is a new Flemish pear, and no garden should be destitute of it. The tree is of moderate growth, the young shoots long, yellowish-gray."

The fruit is of medium size, obovate, narrow, but blunt at the stalk. Skin, pale yellowish-green, slightly russeted. Stalk little more than an inch long, stout, often fleshy, obliquely inserted in a slight, irregular cavity. Calyx very short, spare, with few divisions, set in a basin of moderate depth. Flesh exceedingly juicy, melting, sugary, rich and delicious. Ripe last of Sept.

THOMAS says it is "very variable—when well-grown and fully ripened, *it has no superior, and few equals*, in its exceedingly rich, delicate, perfumed flavor—but often of poor quality."

COLE says, that, "in a warm soil and favorable season, *it has no superior*, but it varies. Hardy, and good bearer. Does not crack. Poorer in moist soil."

Those extending their number to twenty-five trees, or more, should include the Belle Lucrative.

A FINE HERD OF COWS.

It was our good fortune the other day to step into the barn of the Hon. ELMER BRIGHAM, of Westboro', Mass. We call him "Hon.," not because we are particularly fond of giving or receiving titles, but partly because it is the fashion, and because Mr. B. has fairly earned the distinction in two ways. First, by a long life of integrity and *honorable* conduct every where and in every thing; securing for himself an enviable reputation, and proving how much purity and dignity there may be found in man. And secondly, because his fellow-men have frequently elevated him to those positions which give him the legal distinction which we have used.

Mr. Brigham understands just as well how to raise good cows, and feed and tend and milk them, and obtain great products, as though that little prefix had never been appended to his name; and he understands these matters no better, probably, for that distinction.

Mr. B. "makes milk for the market," and so there was a fellow-feeling between us. His cows were of mixed blood, peculiar to his own management, and had been bred in that mixture for nearly thirty years. They were *cow-like*, every where, head, back, barrel, bag and haunches; they were gentle as "sucking doves," with large, bright eyes, legs just right for large and rotund bodies; hair soft and sleek, tails slender, and ought to have had a long tuft of hair on their ends—the only thing, by the way, in which they lacked the true proportions. They stand in warm, clean stalls, and are fed, if we rightly understand him, but twice each day, but are then allowed to eat as much as they will with a sharp appetite, and they usually do not stop until they are pretty thoroughly filled. Their food consists of several kinds of hay, oat-straw and corn stalks and corn butts, all cut and mixed; this is placed in the feed trough, and two quarts of cob meal or its equivalent in shorts or some other grain added; a pailful of salted water is then added for each cow to be fed, turned upon the cut hay and carefully stirred together. The cows are kept eating upon this until about nine o'clock in the morning, when they are turned out, drink heartily, and, in the course of an hour, tied up again, when they soon lie down and alternately sleep and chew their cud during the rest of the day. Mr. B. takes care of the cows himself, and when he enters the barn at any time between 9 and 3 in the afternoon, they do not rise, but merely turn an eye and an ear towards him, as much as to say, "We understand you, Sir, there is nothing for us now," and then they doze or chew again just as they elect. But at 3 o'clock he commences preparing feed again, just as he did in the morning, and places it before them until they are satisfied, turns them out to drink and stretch, and ties them up for the night. This is the every-day process,—and Mr. Brigham states that it is easier and quicker than it is to feed out long fodder and repeat it several times, as was his former custom, and which is probably the present one in a majority of cases.

This plan of feeding, tried at first as an experiment, has so strongly commended itself, in regard to the ease with which it may be done, the saving that is apparent in the feed used, and the fine effect it has upon the cattle, that it has been adopted as the true mode of feeding milch cows.

It will be observed that the grain given these cows each day is equal to *two quarts of corn meal*; and this, with a few roots occasionally, and the mixed fodder before mentioned, comprises their entire food. With this treatment, these cows, seven in number, gave Mr. Brigham for the year ending in October last, *eighty-one dollars and ten cents each!* The milk was sold to the Westboro' milk company at the prices which they usually pay.

The prices of meal and hay will vary a little in different places, so that no exact statements can be made as to cost every where; but *two* quarts of meal per day at $1 a bushel, and *twelve* pounds of hay per day, at $15 a ton, would feed each cow for something less than $50, thus leaving him over $30 for each cow, beside selling all his fodder at $15 a ton for cash at his own door, and whatever profit there may be in the growth of the cows,—for he raises those he milks himself.

KEEPING COLTS IN WINTER.

It is a nice business to raise a colt right. A great many promising animals are so handled, or rather shirked off, during the first years of their lives, that they never come to be what they would with proper handling. To keep colts right, they must be so provided for that they will grow right straight along. If they get a set-back in the winter, it is fatal to their proper development, and if a colt is obliged to lean against the fence, in the spring, with his lousy coat turned towards his head, it is an affidavit of bad keeping, that will out-swear any protestations of "plenty to eat, and well cared for," that any mistaken farmer can urge in palliation of his neglect.

In winter, colts want a dry, sheltered yard, well stocked with straw ricks, fixed up on rails like an X, across a firm bearing beam. These will afford both fodder and shelter. The yard should be well encircled by open sheds, and kept clear of rampant steers, and all other hooking cattle. It is well enough to handle the colts in day time, and keep the hair straight and clean, but they should sleep at will during the nights, and not be hitched up by a halter, or shut in a narrow stall.

For feed, the colts should have what hay they will eat up clean, and the hay should be of good quality—none of your rain-soaked and mow-burnt

stuff, not fit for bedding. We abominate bad hay, and have wished, that just for experiment, some of our slovenly farmers were transmogrified like an old fellow we read of, who was made to eat grass like an ox, till he learned some good horse sense. Besides the hay at regular hours, and the straw they pick up between times, the colts should have a feed of chopped grain, or other mill stuff, or oats, every day, a bite of carrots now and then, a lick of salt, with a dust of clean wood ashes in it occasionally, and a regular access to pure water for drink. All this is provision and care well laid out, and that will pay, if the colts themselves are worth raising at all—*Ohio Cultivator.*

For the New England Farmer.

EXPERIMENTS WITH THE TURNIP CROP.

I append a few remarks for the *New England Farmer*, as I consider an unsuccessful experiment (in detail) often of as much service to the farming community, as a very successful one. About two years since my attention was called to a new kind of turnip (to me at least) which in appearance resembled the "Ruta Baga, or Yellow Swede," only the bulb was white instead of yellow; the leaf a darker green, and the roots much more forked, and firmer in the ground than the Swedish; but for culinary purposes far exceeded it. The next spring I tried to procure some seed, but without success, but I found one of my Yankee neighbors had procured some seed, and was retailing his plants at seventy-five cents per one hundred. I was induced to purchase a few, which I transplanted with great success, and have now a supply of seed for next year.

But in the last spring, 1857, I was at Nourse, Mason, & Co.'s establishment, and purchased a small quantity of "yellow ruta baga," and also of "white ruta baga," and I believe the like quantity of "Cole's cabbage turnip seed," and shortly after my return home, I found a small quantity of seed from my "new favorite," which the person of whom I had it recommended my sowing early: accordingly about the 15th of June, I had well prepared about one-third of an acre of land. I then drilled six rows of my "new turnip," six rows of Cole's cabbage turnip, six rows of the "white Swedish," and the balance of the land, which was by far the greatest portion, with the common "yellow ruta baga." The weather was propitious, and the seed came up well. I horse-hoed the intervals, and hand-hoed, and thinned the plants in the rows: they thrived exceedingly, and promised an abundant crop. Some few weeks after, a friend applied to me for seed, and I furnished him with what I had remaining of each kind. About the middle of July, he planted his in drills, and never weeded or hoed them until the September following. They then appeared so choked with grass and weeds, that I would not have given him one dollar for the whole, and I advised him to mow the crop, and cart it into his cow-yard. But no, he hired a couple of Germans, and hand-weeded the whole. And now for the result of both crops.

You will observe mine was sown early in June, his one month later; mine was well cared for, his neglected. About the middle of August, mine, particularly the yellow Swede, appeared shriveled and stunted in the leaf, and on farther examination, I found the heart of the plant showed symptoms of decay, and by the middle of September I had scarce one yellow Swede remaining; next to those was the white Swede, and two-thirds of those shared the same fate, and the Cole's cabbage, and my new favorite did not appear much better, only the bulb grew much larger before they commenced rotting. But I happened to transplant two rows from my new turnip, which grew much larger, and more sound than any of the others. But my friend's crop was quite the reverse; after he had them weeded, and sprinkled a small dressing of guano on them, such a fine crop of fine sound turnips could scarcely be equalled, particularly the Cole's cabbage turnips, many of which will weigh from seven to nine pounds each, and for culinary purposes, exceed any that I have ever seen. I should think the "new favorite" which I before alluded to, and distinguished by that name, and the Cole's cabbage, are almost identical, only the leaf of th Cole's are more dented, and the stems a darker purple than the others. I find recently, several other persons in this neighborhood sowed early, and their crops shared the same fate, while all the late sown are sound in quality, and in quantity abundant. One reason in calling your attention to this, is, to inquire more particularly if the cause is not in *sowing the seed too early.* I have occasionally cultivated the Swedish turnip for upwards of forty years, early and late sown, and never recollect losing them in this way before.

JOHN MOODY.

Mountain Grove, Bridgeport, Ct., Nov. 2, 1857.

REMARKS.—Little can be said of value in regard to particular cases of this kind,—but as a general rule, we have no doubt that late sowing, that is, after the 20th of July, results in good crops much more frequently than early sowing, say before the *first* of July. Plants of the turnip kind that are sown late, escape the ravages of the fly much more than early ones, and there seems to be something more natural and congenial to the plant at a later period, than in an earlier one. But experience is the best schoolmaster, after all, in these cases.

NICOTINE.

This peculiar principle is a product of the leaves and seeds of tobacco, by infusing them in acidulous water, adding lime, and distilling, and then washing the product with ether, when an ethereal solution of nicotine is obtained. One drop will kill a dog. It causes the pupil of the eye to contract, has a bitterish acrimonious taste, and a pungent smell, and on the whole, is one of the nastiest things in creation. It is composed of 73-26 per cent of carbon, 9-25 per cent of hydrogen, and 17-09 per cent of nitrogen. It is related to a class of bodies called vegeto-alkalies, and is capable of uniting with an acid. On the human brain it produces a soothing effect, which is thought very pleasant, but can never be considered otherwise than unhealthy.—*Sci. Am.*

For the New England Farmer.

GRINDING FEED.

MR. EDITOR:—In the last *Farmer* I notice a quotation from the *Ohio Farmer*, recommending the grinding of hay and other feed for our farm stock. There may be an advantage in this—but, if so, I very much doubt whether the writer of that article has given the true reason for it. I can hardly believe that it is to be found in the saving to the animal of the *labor of chewing* the food. I have always been taught, and am still quite disposed to believe, that the process of chewing food assists in its digestion in other ways than by minutely dividing it. The saliva, which is mixed with the food during mastication, is supposed to possess strong solvent properties, and also to produce chemical changes in the food, which fit it to be more readily acted on by the gastric juice in the stomach. Physiologists recommend slow eating, that thus the most abundant supply of saliva may be furnished; and dyspepsia, and a long train of diseases, are supposed to follow the disregard of this advice. Probably no one, at this day, would recommend the hurried swallowing even of "*hasty* pudding," without some considerable amount of chewing. A friend of mine, one whose business was teaming from Boston to a town twelve or fourteen miles in the country, told me that his practice had been to leave his team at the south side of Faneuil Hall, go to North Market Street, eat his dinner, and be back to his team again after an absence of only *five minutes*. He had done it by his watch in four and a half minutes. He has since suffered, and is still suffering, the consequences of such a reckless habit, having been intensely afflicted with dyspepsia for a number of years. With this experience in his own person, he discontinued cutting hay for his horses' feed, giving them long hay, moistened and sprinkled with meal, thus compelling them to use the means which nature, *perhaps wisely*, provided for the preparation of their food for digestion. Is there any reason why thorough mastication of food is less nccessary for a horse or a cow than for a man? A neighbor of mine, an old and experienced farmer, once said to me, that a calf would require much less milk when allowed to take it in the natural way, than when required to drink it from a pail. From my own experience, I am convinced this is a fact. If it is so, is it not likely that the reason is, that, in the slower mode of taking it, the saliva has a better opportunity to mix with the food, and thus render it more digestible, more appropriable to the promotion of growth?

I am quite ready to believe there may be an advantage in grinding hay for cattle, as it would thus go into the stomach in a finely divided state, whether the animal chewed it much or little, and it would thus be more readily acted on by the gastric juice. A greater per centage of the food would probably thus be digested, and pass into the circulation, and form flesh or milk. Still, there does not seem to be the same reason for grinding hay that there is for grinding grain. Most of the grains are provided with a covering that will usually resist the action of the gastric juice unless it is broken—and in the haste of eating, much grain would be swallowed whole, and pass through the animal undigested. Even birds, with their strong digestive power, are known in this way to be the means of conveying seeds uninjured to distant places. Hay, on the contrary, has no such resisting coating, and from its shape is not so likely to reach the stomach without being at least bruised and crushed, sufficiently to enable the juices of the mouth and stomach to mix with it, and put it in such a condition that it will yield up most of its nutriment.

M. PRATT.

Concord, Mass., Dec. 15, 1857.

GOING TO THE FAIR.

BY MRS. FRANCES D. GAGE.

Ben Fisher had finished his harvesting,
And he stood by the orchard gate,
One foot on the rail and one on the ground,
As he called to his good wife—Kate.
There were stains of toil on his manly hand,
The dust of the field on his hat,
But a twinkle of pleasure was in his eye
As he looked on his stock so fat.

"Here, give me the baby, dear Kate, you are tired,
I fear you have too much care,
You must rest and pick up a little, I think,
Before we go to the fair.
I'd hate to be taking fat oxen, you know,
Fat hogs, and fat sheep, and fat cow,
With a wife at my elbows as poor as a crow,
And care-wrinkles shading her brow.

"'Can't go,' did you say? 'Can't afford the expense?'
I know, Kate, our crops ain't the best,
But we've labored together to keep things along,
And together we'll now take a rest.
The orchard is bare, but old brindle is prime,
And Lily and Fan are a show,
Your butter and cheese can't be beat in the State,
So up to the fair we will go.

"You've ne'er seen a city, and Cleveland is fine,
Ne'er seen the blue, billowy Lake,
Ne'er rode in a rail car, nor been in a throng,
So, Kate, this journey we'll take,
And garner new feelings, new thoughts and new ways,
If we find those that suit as we roam,
And garner up strength with our head, heart and hands,
For the love and the duties of home.

"I sometimes have thought, Kate, as I plodded along,
For months, o'er the same weary ground,
That a fellow who had such a really hard time,
In Ohio no where could be found.
But when I've been called from my home for awhile,
And seen how the rest get along,
I've come back to my toil with a light, cheerful heart,
And 'there's no place like home,' was my song.

"I wonder that mothers don't wholly despair,
Who ne'er from their cares get away,
But walk the same tread-wheel of duty for years,
Scarce stopping to rest night or day.
I don't wonder they grow discontented sometimes,
That their feelings grow rapsy and cold,
For toil never-ending, and labor uncheered,
Makes women—and *men*, sometimes scold."

Kate looked up with a smile, and said, "Ben, we'll go;
There may be better oxen than ours,
Horses swifter on foot, and finer by far,
Better butter and cheese, fruit and flowers,
But there's one thing I claim I know can't be beat
In the whole Yankee nation to-day,
I'd not swap him, I know, for a kingdom to boot—
That's my 'gude man;'" and Kate ran away.

Ohio Cultivator.

For the New England Farmer.

THE THINGS I RAISE—No. 5.

CHUFAS, OR EARTH ALMOND.

This is a sort of grass, that produces on its roots a small bulb, about the size and somewhat the shape of a peanut. It is sweet, and resembles in taste a chestnut, though not so agreeable, for the skin sticks in your throat after, or while you are eating. This thing was sent out by the Patent Office, and recommended for pigs. I have no doubt the pigs would like them, but if they do, I should say—let them dig them; for it is slow business picking them up, they are so small, not averaging larger than good sized beans. It seems to me almost worthless, except it may be to grow on the sands of Cape Cod, or some such place where a man's farm moves from one town to another every time the wind blows; here it might answer to keep the sand covered with grass, which I presume—though I did not try it—would be readily eaten by cattle; and as it remains in the ground forever unless pains are taken to remove it. It yields quite abundantly, so far as number goes, some three or four hundred to a hill, from half a pint to a pint. If any person is disposed to try a few, and will send stamps to pay postage, &c., I will forward some by mail. The boys may be disposed to raise them as a substitute for chestnuts, which are not always abundant.

GRANGE'S NEW EARLY BROCCOLI,

Sent to me by Patent Office. It is a worthless sort, if mine were true, for they did not produce a single head in the whole lot.

WINNIGSTADT CABBAGE.

This is a comparatively new variety, and one I believe of great excellence. I received the seed from the Patent Office, and it was true. It is of the sugar loaf form, and of medium size, though larger than the Early York, and but little later. The head is very compact, even of the smallest, and what is in their favor, they all head, not more than one in a hundred failing to do so. Should be started in hot beds same time as Early York, and they will be quite early and profitable. I consider it as well worthy to enter the list of vegetables to be grown for market.

JAMES F. C. HYDE.

Newton Centre Dec. 10, 1857.

VALUE OF FALLEN LEAVES.

No manure is so well worth the saving in October and November as the falling leaves of the season. According to Payen, they contain nearly three times as much nitrogen as ordinary barnyard manure; and every farmer who has strewn and covered them in his trenches late in the fall, or in December, must have noticed the next season how black and moist the soil is that adheres to the thrifty young beets he pulls. No vegetable substance yields its woody fibre and becomes soluble, quicker than leaves, and from this very cause they are soon dried up, scattered to the winds and wasted, if not gathered and trenched in, or composted before the advent of severe winter.

As leaves are poor in carbon and rich in alkalias salts, as well as nitrogen, they are especially valuable in compost with manhaden fish manure and dead animals, poor in potash, but abounding in carbon and lime phosphate. But the great value of leaves is in the extra nitrogen they contain. Prof. Jackson truly says that the compounds of nitrogen not only decompose readily themselves, but they also induce the elements of other organic matter with which they are in contact, to assume new forms, or to enter into new chemical combinations; and according to the long continued and varied Rothbamsted experiments of the indefatigable Lawes and Dr. Gilbert, nitrogen, in its compound form, (ammonia,) also exerts the same potent influence on the inorganic or mineral elements of the soil, rendering even sand into the soluble food of plants. Yet every farmer or gardener ought also to know that his own mechanical aid in trenching or plowing, in order to keep his soil permeable and absorptive, is indispensable to aid nature in developing her chemical process.—*Rural New-Yorker.*

THE GRAVENSTEIN APPLE.

One of the best fall apples in all the world, is the "Gravenstein apple," so called. It originated in Germany, but is found to flourish well in all the northern sections of the United States, where the apple will flourish, and its introduction to this country resulted in a rich acquisition to our fruits, and the person who did so good a deed should receive due honors from all the lovers of good apples. This person, we learn from *Hovey's Magazine of Horticulture* for October, was Capt. John DeWolfe, of Dorchester, Mass.

It is possible, and even probable, that it was brought over into New York some time before by some of the Dutch; this is not exactly certain, but it is exactly certain that Capt. DeWolfe did introduce it into New England, and that from his tree it has spread into thousands of nurseries and orchards. In proof of this, the editor of the *Magazine* above named published the following letter from Capt. DeWolfe, which gives in detail the history of the transaction, which though a quiet and humble deed, is nevertheless more honorable and more useful, and productive of more real blessing and good to our community, than all the "fillibustering" of Walker or any other in this fillibustering age.—*Maine Farmer.*

THE CAPTAIN'S LETTER.

DEAR SIR:—As there appeared to be some discrepancy in the account of the origin, name and time of introduction of the Gravenstein apple in this country, I beg leave respectfully to hand you this statement, not that I think there is any especial merit in the introduction, as I think we are all bound to do what good we can in promoting and enriching the products of our own soil; neither do I make any pretensions to be a connoisseur in fruits, or vegetables, but this I can say without the fear of contradiction, that in early youth I had a kind of natural instinct or faculty, which enabled me to find the best apple tree in the neighboring orchards, the darkest night that ever was, with as much facility as in riper years, I could find my way both day and night blindfold, to maintop bowline.

However, if it should be considered that there

is merit in such introduction, I see no reason why my dish should not be the right side up, in order to receive what may legitimately fall therein; if nothing prior to the following can be shown, then perhaps it may be well to record the fact, viz.:

Being at Copenhagen in the fall of 1825, I noticed at the wharves a number of small craft from Holstein, with fruit, principally apples; I bought some which were recommended as the Gravenstein, a very superior apple, high flavored as to the taste and smell. I was so much delighted with this fruit, having never heard of it before, and being desirous of cultivating it in my little garden in Boston, that I requested my friends Messrs. Raynolds & Co. to purchase for me at the nursery two trees of that kind of fruit, and to be sure that they were genuine Gravenstein, which they did.

On my arrival in Boston in May following, the trees being seven months out of the ground, I had some doubts as to my being able to make them live. Knowing General Dearborn to be an amateur in trees, I presented him with what I thought to be the best one, and planted the other myself; they both lived and grew vigorously.—About a year afterwards I moved to Bristol, R. I., and took my tree with me, and planted it there, and when I left that place several years subsequently, it was in a bearing state.

I was desirous to know the origin of its name and place, and was informed that it originated in a nobleman's garden in Holstein, near to a family gravestone,—hence the name Gravenstein.

For the New England Farmer.

CULTURE OF THE CARROT.

It is said this crop the present season has fallen short of expectations nearly *one-third!* How is the fact? 1. What is a proper expectation of crops? 2. What has been the product? Past experience has shown, on strong land well and carefully cultivated, a product of from twenty-five to thirty.five tons to the acre—estimating forty bushels to the ton.

Mr. ROGERS, of South Danvers, informed me that he had twelve hundred bushels of the orange carrot on about one and a half acres—or twenty-four tons to the acre. Before they were dug the product was estimated much more than this. The land was strong, the appearance of the field very fine, but the crop turned out less than was expected. Mr. BUXTON had a field of about half an acre, which yielded at the rate of thirty-four tons to the acre. Only two cords of stable manure were applied upon this field. In all other respects it had the most careful culture. Mr. B.'s land is strong, rocky and fertile. The short home carrot was the variety grown, thirty-five bushels of which weigh a ton, or fifty-seven lbs. to the bushel. Mr. WATERS' field of carrots promised well early in the season, but when I last saw it, there was more *yellowness* above than below the surface, and I expect the product did not exceed twenty tons to the acre. Mr. BROWN'S field yielded at the rate of thirty tons to the acre. His land is first-rate, and his supply of of manure not limited—not less than *ten cords* to the acre. I saw, in the course of the season, many other fields, but have no good reason to believe that any of them yielded more than twenty tons to the acre, generally less, so that twenty tons may be set down as a fair product of the season. These sold, delivered, for $10 a ton. Is not this a good use of land?

Is there any crop, with the same labor applied, that will pay better than the carrot? True, it requires at first particular care, but when it gets a going, as the boy said, *it whistles itself*, and often fills out abundantly. I remember a few years since, a gentleman from Berkshire county, who had acted as chairman of the committee for viewing crops, stated at one of the farmers' meetings in Boston, that he had seen fields of carrots yielding forty tons, or two thousand bushels to the acre. When asked how this was made certain, he said, the committee dug a patch in September, and found twenty tons to the acre, and knowing the propensity to increase in weight until the end of November, they judged there would be twice as many at the time of harvesting. Essex cultivators do not come at their results in this way. Nothing short of *actual measure* and *actual weight* satisfies them, such as honest men would be willing *to buy* or *sell by*.

December 5, 1857. ESSEX.

FRACTIONS OF AN ACRE FOR EXPERIMENT.

It is often very desirable to the farmer to measure off from a lot of land fractions of one acre, for the purpose of making a series of experiments upon different modes of planting, cultivating or manuring. To facilitate this we give below the measurement of a side of a square, containing the following fractional parts of an acre:

	Feet Square.
1-16 of an acre contains about	52¼
1-8 " " "	73¾
1-4 " " "	104½
1-3 " " "	121¼
1-2 " " "	147½
1 acre " "	209

We cannot but suggest to our readers the importance and advantage of combining with the usual duties of the farm such experiments as may easily be conducted without any interruption of the work, and yet will often lead to the most decisive results. If one is to plant an acre of potatoes, for instance, divide it into quarters, and each quarter into eighths if needed, and plant one part with small seed, another with large, another cut, and another whole; manure one part *in* the hill, another outside. On one quarter try *salt* to prevent the rot, on another lime, another ashes, &c. No man can do this without soon increasing his agricultural knowledge, and soon after, his wealth.—*Granite State Farmer.*

PEAR-SHAPED TOMATOES.—Mr. Isaac B. Rumford, of Oakland, brought to our office a box of fine pear-shaped tomatoes, raised by him from seed imported last spring. They look very nice, having the regular pear shape, and a smooth skin, with very few seeds. They can be divided nearly in the middle so that one-half will show no seeds, and appear to be quite an improvement in the ordinary tomato. We thank Mr. Rumford for his attention.—*Cal. Far.*

WASTE OF SEWAGE AND FARM-YARD MANURE.

In your journal of the 19th of January last, a gentleman, of Falmouth, stated as follows:

"Seeing that Messrs. Gibbs, as British agents of the Peruvian Government, have raised the price of guano £2 per ton, would it not be well to know if Messrs. Barrodia Brothers, the United States agents, have done the same, the consumption there being about one-third of that here? Brother Jonathan is not likely to stand it. Taking the imports of both countries at 400,000 tons, it would be £800,000 out of the farmers' pockets for this year. The freight and cost of shipping it are the same as when sold at £9 per ton."

Is not this enough to arouse and to open the eyes and ears of every farmer in England, and to forthwith preserve every particle of manure that is, or can be, made upon a farm? Nay, let each and every farmer preserve the black water, which is the essence of the manure, and convey it upon the farm. The sewage of the metropolis, containing 2,500,000 inhabitants, is worth at least £3,000,000 yearly, which goes to manure the sea, instead of going back to the land which produced it.

The great agriculturist, I mean the far-famed Mr. Coke, the late Earl of Leicester, wisely said, the more meat a plowed poor-land farmer sent to Smithfield, the more corn he would be enabled to sell per acre at Mark Lane. Convert plenty of corn and cake into meat; as the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the dung is straw alone, the cattle are straw, the farm is straw, and the farmer is straw—and they are all straw together, said the great cultivator, Mr. Coke, who lived before his day.

Wonders are yet to be done in agriculture by a combination of agricultural chemistry, botany, geology and other sciences, &c.—branches of agriculture. Steam, gas and the telegraph are the only three steps towards a great mountain. And let the readers consider that the value of bones, guano, and many other artificial manures, were not known a century back to the cultivators of the soil. The wheels of Nature and Time were never made to stand still or roll backward; and little is known in agriculture to what is yet to know; agriculture may truly be said to be in its infancy. The scientific implements in husbandry now exhibited, denote what I say—implements that were not known half a century back.—*Mark Lane Express.*

For the New England Farmer.

CHEAP BEE HIVES.

"AMICUS," in the *Farmer* of Nov. 21, says: "I must differ from Mr. Quinby respecting the economy of planing a bee-hive inside." He reasons very consistently to all appearance, showing how much labor of the bees is saved, &c., and *supposes* he can see an actual difference in results in favor of a planed hive. I fear "Amicus's" experience is not to be depended on; he reports only one case. I did not recommend leaving a hive rough inside, (as so much labor for the bees, seemingly, for nothing,) without, as I thought, good reasons. I had found that although two swarms might stay and work well in such hives; that the third, (especially if quite large,) would have so much difficulty in holding fast, that they lost more time in swarming out and being re-hived, than all the advantage of smooth hives for the whole. Another risk: Every time a swarm leaves a hive, the chance of going to the woods increases. If one in six, or even ten, is thus lost in consequence, true economy would seem to dictate a rough hive. A large swarm of bees contains several thousands, and their weight when first hived, (before any combs are made,) must be supported by a few hundreds. If nothing but a smooth surface is presented for their claws to lay hold of, it is easy to imagine the difficulty; and their frequently falling in a mass to the floor, interferes materially with their labors, even when they do not leave.

M. QUINBY.

St. Johnsville, N. Y.

For the New England Farmer.

CARROTS, 2000 BUSHELS PER ACRE!

FRIEND BROWN:—I saw in your December *N. E. Farmer* a piece relating to carrots, over the signature of "Henry Lee, in Waltham." In 1852, I purchased a farm near my residence in this town; on one-fourth of an acre, had been raised carrots, for several years before I made the purchase. I have continued to raise them on the same piece every year since. The land is rich, but rather stony, having a thick surface of loam resting on clay and gravel subsoil. In fact, the soil is very much like Mr. Lee's, and has been cultivated like his in every respect. I have plowed the land the last two years, three times each year, with a Michigan plow. I gave four hand weedings, and sowed the rows only 12 inches apart. The first three years, I raised about 175 bushels each year. The fourth, I plowed with a Michigan plow, deep, and raised 200 bushels. Last spring, I plowed with the same plow, giving a furrow 13 inches, and I raised, by actual measurement, 342 bushels, or at the rate of 1368 bushels to the acre. The carrots were the largest ever raised in this section, and were many of them over two feet long, and proportionally large. This fall, I have enlarged the piece to 100 rods, and sunk all the rocks 18 inches below the surface, at an expense of $40,—and if I am as successful next year as I have been this, I shall be disappointed if I do not raise at the rate of 2000 bushels per acre. I am satisfied by my own experience, that carrots can be raised in larger crops by planting the same piece every year.

In the words of Mr. Lee, "Why have they not been more generally and more extensively cultivated in a State where feed for milch cows and horses is so extremely high?"

S. D. DAVENPORT.

Hopkinton, Dec. 10, 1857.

HEIGHT OF COLTS.—A very reliable rule to judge the height a colt will attain to when full grown, is the following: When the colt gets to be three weeks old, or as soon as it is perfectly straightened in its limbs, measure from the edge of the hair on the hoofs to the middle of the first joint; and for every inch, it will grow to the

height of a hand of four inches when its growth is matured. Thus, if this distance be found sixteen inches, it will make a horse sixteen hands high. By this means a man may know something of what sort of a horse, with proper care, he is to expect from his colt.—*Tennessee Farmer and Mechanic.*

COWS AND BUTTER.

MR. EDITOR:—In a late number of the *Telegraph* your correspondent B. asks for a detailed statement, as to the feeding of cows and making butter in autumn and winter. Now if B. can gather anything of value to himself from *my* statement of the mode we have been practising for some sixteen years, I shall be repaid for my trouble in offering it.

I will begin with the care of cows about calving time. For several days before this period, I feed ruta bagas or turnips, if I have them; if not, a little cake meal will answer, to keep the cow in about the same condition she would be on grass. After calving, I give warm slop for drink for the first three days; this is made by scalding a little wheat bran; after that I let her have cold water to drink; I don't give much strong food for a week or two, for fear the udder will swell; in that case I milk all I can get first, and let the calf suck afterward. In cold weather I stable the cows at night and most of the day; I let them out to water at noon, and they have free access to salt, and are curried every morning.

As to feed, I consider there is nothing better than sweet corn meal and good hay; but I would here say that I am a firm believer in raising roots for cows; if fed judiciously, cows will milk quite as well, and the cost will be much less, and the quality of the butter not be injured. In feeding roots to milch cows, a little corn meal should be fed with them, and they should be fed directly after milking, as the smell of the roots is then destroyed.

MILKING.—Perhaps more depends on this than B. is aware of; the time should be equally divided; the udder and teats, if dirty, should be washed with warm water and wiped dry. I never allow any one to go to milk without first washing the hands. We milk fast, and permit no talking while at it; I don't allow the fingers to be put into the milk to moisten the teats; it is an unclean practice. We strain through a fine wire strainer, and put about five quarts in a pan; these pans are tin, and they are kept bright and scalded frequently. The temperature of the room where the milk is kept should be from 55 to 65 Fahrenheit; there should be no cooking done where milk is kept; there should not be left more than three milkings stand at one time, as the cream gets bitter. Should the cream not rise fast enough, about a gill of sour milk to each pan, when strained, will help it. The cream should be stirred every day, and the oldest should not be over a week.

CHURNING.—When churned, the cream should be of the temperature of 62 degrees.

THE BUTTER.—Should the butter need a higher color, or more grass-like flavor, a few yellow carrots, pared, grated and boiled in new milk, strained, and the liquor put in the churn with the cream, will do it. The churn, butter-worker, scale, &c., should be kept bright and clean, and scalded before and after using, and should be thoroughly dried before being put away for future use. Every particle of buttermilk should be taken from the butter before the salt is added; the best quality of salt should be used, and this should be thoroughly worked in, or the butter will be streaked. After the butter is put into pounds and printed, the cloths should be put on; they should be of fine white muslin, and kept white, and should be put in salt and water and wrung dry before using; the butter may then be put in the tub, which should be clean and sweet.

Now if B. is regular in attending market, and will follow the above directions, he will soon find customers for his butter at tip-top market price. I would here add, that B. should see to the milking of the cows himself, and his wife should take charge of it after it is strained; for herein lies the secret of success—and not trust to careless hired help, as this branch of farming will pay if rightly attended to. I find by reference to my accounts, that my cows have averaged a little over sixty dollars each, thus far the present season, and the season has yet four months to run.—*Germantown Telegraph.*

For the New England Farmer.

POSITION OF THE FARMER.

MR. EDITOR:—It being near the close of the year, I offer some reflections and suggestions that should be pondered upon by all who have a home among the hills and valleys, where want and gaunt misery seldom come.

The year that is about closing upon us has been to the farmer about an average one in the products of the earth; some good, others fair, and a few of the less necessary, poor; prices have been somewhat affected, but not so much as in other branches of business. We live first ourselves, let the price be what it may, and then if we have more than we want, we sell to those who will purchase. Our rents are small compared with those in cities, as a farm worth $5000 is no more per year than a small merchant or clerk pays for an ordinary house in Boston or vicinity; and while we get our rent, we also obtain free our fuel, grain, pork, butter, milk, eggs, fruit and vegetables in abundance, together with a horse and carriage to ride when and where we please, without extra expense, and with ordinary management sell from $500 to $1000 worth besides; and this ought to be observed; we do not sell, or have in trade, our farm or stock; but the *products* only. What we lose, is quite likely to be by investing in stocks, &c., off the farm, which investment seems to have the fatality of growing beautifully less every year; better invest at home upon the farm, by reclaiming swamp lands, setting out forest trees upon sandy plains and steep declivities, draining, &c.

To a lazy man or boy the farm is a hateful place, and my advice to such is to leave it, for God's sunshine is better than the shadow of such persons. Loafing has become a science, one of the fine arts; labor is considered ungenteel by too many. Some prefer to steal, gamble or rob, while others prefer to beg or go hungry—anything but work; but there are as many to

feed to-day, as yesterday, or a year ago; population and immigration continue to fill the country at a rapid rate; consumption increases, and the ability to supply scarcely keeps pace with the demand. The rush to cities to trade and live genteelly has been a curse to the country, draining the farm to fill the cities, and if the general crash shall change the tide and establish more contentment on the farm, then we shall have gained by the sad lesson.

Now is the time to review the past, and, if any of us have been bitten by the various delusions of the day, to draw from them lessons of wisdom, and learn, henceforth, to shun the rock upon which so many have dashed their hard earnings, as well as fond hopes. It is but a poor consolation, that others are in the same difficulty with ourselves. Let us strive to lend aid, not require it.

Farmers cannot afford to "look at the elephant" often, and when they have once seen the curiosity, it should suffice, remembering that it is the same, whether it's Cochin China fowls at $50 a pair, Chinese yams or sugar cane, or hunting up a nice, easy and genteel business, where a person with $25 capital can obtain $100 per month, &c. This is a fast age, and if we appropriate the good things of this world for our comfort and convenience, and use them wisely, as God intended we should, a long and happy life awaits the honest sons of the farm, such as few others can equal. That they may blend more of the poetry of life with the labor of the hands, thank God and take courage, is the wish of a

Concord, Dec., 1857. BROTHER FARMER.

For the New England Farmer.

CURCULIO.

This subject has seemingly been exhausted, and the recent communications upon it but repetitions of what has been said before, or the failure of remedies recommended. Well, "Hope on, hope ever." Try experiments; reccommend them to others, and give the results to the world.—The question is often asked, where do curculios live over winter? I frankly confess that I do not know, but think that they live in the earth, and will give my reason, that others may judge what grounds I have for my belief. It is a well known fact, that curculios come from the earth perfect insects in from two to three weeks after they have finished their work of destruction upon the young fruits in the spring. They prepare for another generation, and according to the *general* rules of insect life, (ants and bees excepted,) must soon die, whether they can find conveniences for depositing their eggs or not. Now the question is, how do the larvæ of this late brood find nourishment to mature a sufficient number, to do the immense amount of mischief that we annually witness? The black knots on plum and cherry trees is one resource, and I have often found them or their work in a ripe apple; the crescent mark had healed up and resembled a mole on the human skin, and the little worm had not length of life sufficient to reach the core or do but little mischief, yet the unmistakable signs were there. Peaches and plums often have a worm in them, and the egg must have been deposited after the stone became hard, or the fruit would have made but little progress towards maturity. Late in July, and early in August, I have seen curculios upon ripe currants and raspberries who seemed to be seeking for a place to deposit their eggs. Late in the season, blackberries, raspberries and whortleberries frequently have worms in them, and they are rejected as being maggoty but may it not be curculios? Who will decide or throw any light upon the subject? Let the ball be kept in motion. MRS. N. DARLING.

New Haven, Conn., Nov. 9, 1857.

UNITED STATES AGRICULTURAL SOCIETY.

SIXTH ANNUAL MEETING.

The United States Agricultural Society will hold its sixth annual meeting in the lecture room of the Smithsonian Institution, at Washington city, on Wednesday, the thirteenth day of January, 1858, when the election of officers will then be held, and the business required by the constitution of the Society will be transacted.

Officers and members of the Society are respectfully notified to attend, and a cordial invitation is extended to State and other Agricultural Associations to send delegates, that there may be a general representation of agriculturists "in Congress assembled," to protect and sustain their interests, acting as a national organization on such matters pertaining to agriculture as may be deemed appropriate. Gentlemen from other lands who may be interested in the acquisition and diffusion of agricultural knowledge, are also invited to attend, and to participate in the proceedings.

The published volume of Transactions for 1857, containing reports of the *Trial of Reapers and Mowers at Syracuse*, and of the *Grand Annual Exhibition at Louisville*, will be delivered to members of the Society at the annual meeting.

Important agricultural topics will be publicly discussed, after introductory remarks by eminent scientific agriculturists. Among them will be: "*The Chinese Sugar Cane*," "*The necessity of having a more perfect knowledge of the mineral necessities of our own crops developed*," "*Meteorological observations for the benefit of agriculture*," "*Manures and Fertilisers*," "*The disease known as 'Hog-cholera,'*" "*The Improved Kentucky Sheep*," "*Agricultural Colleges and Farm Schools*," and "*The Agricultural Politics of our Country.*"

Public notice will be given of the time when the discussion of each of the above-named topics will be commenced. Gentlemen having other topics pertinent to the advancement of agriculture, which they may wish to introduce or to have discussed, will please refer them to the Executive Committee, through the Secretary, that a place may be assigned them on the programme.

Propositions from cities at which the next Annual Exhibition of the Society is desired, will be received and considered.

The business office of the Society is in Todd's Marble Building, one door west of Brown's Hotel, Pennsylvania Avenue, where all interested in the cause of agricultural improvement are invited to call when in Washington city. Agricultural newspapers directed to the Secretary will be there placed on file for public inspection, and contributions of agricultural works for the library are

solicited. Models or drawings of agricultural implements or machinery, if sent free of expense, will be placed on exhibition.

Gentlemen who may wish to become life members of the Society, can do so by paying or remitting ten dollrrs to the Treasurer, Hon. B. B. French, Washington city. This will entitle them, without any further payments, to the full privileges of membership—among these are: free admission to all exhibitions of the Society, the annual volumes of published transactions, and the large and elegant diploma.

MARSHALL P. WILDER, *President.*
BEN: PERLEY POORE, *Secretary.*

For the New England Farmer.

THE PAST SEASON.--OVERPRUNING, ONION BLIGHT—A DESTRUCTIVE FOREST WORM.

MESSRS. EDITORS:—May and June were cold and wet; much corn required replanting, but an average crop was raised, yet with a larger portion of unripe ears than usual. Oats, rye and buckwheat have been good crops. Potatoes have proved more nearly a failure than has ever been know here, for though their vines were large and long, the tubers were proportionately reverse, few and small; one large farmer offering for the digging, only the quantity which he had planted. Apples have been few and very defective. The blossoms were abundant, but cold, rain and clouds held them stationary till they lost their vitality, and they were generally blighted. The apples that set were destroyed, for the most part, by the curculio. Peaches have been nearly all killed by the two last winters, and plums have shared the same fate on my ground, and on that of others. Cherry trees, even in most favored localities, have been in a dying process, and their lives may well be despaired of.

A thrifty apple tree of mine, in good soil, that had born six bushels of Greenings two years before, immediately after the decay and fall of its blossom, showed signs of decay, in its lower branches. The loose bark had been scraped off with a hoe and soap suds applied with a broom, while the tree was in blossom, and I surmised this might have done mischief; but as my other trees, served in the same way, showed no such symptoms, I adverted to another fact. I had pruned the tree of several of its large, low branches, growing horizontally too near the ground, in November, 1855, thinking the higher branches would grow the faster and compensate for those removed. But the tree had reached the age for its mature shape, and I largely reduced its former spread. Hence I am inclined to think the tree has suffered from too large pruning, and may not recover from it. Though healthy, new bark had grown around the wood, where the branches had been removed, yet the large diminution of branches too greatly diminished the natural flow of sap from the roots, by cutting off their channels, and producing in them disease and decay. Whether this theory is correct or not, I would like to have the opinion of vegetable physiologists, regarding it. In a young and growing state, a tree may be safely altered in form and expansion; for new wood will naturally grow to give full development to its sap and the vital energies of the roots, but if the fruit tree has come to full bearing, in all the branches shooting from the parent stock, is not the pruning off of several of these, at once, dangerous and injurious?

Onions, in my own, and in some other gardens, often growing and promising well, till their tubers were of one-fourth or one-half size, showed *white* tips and spots upon their tops, and their growth was arrested early in August, and the blight progressed till their growth prematurely closed. The cause I cannot discover, any more than that of the potato rot, which has prevailed greatly among us, the past season. Sugar beets have been arrested also, in mid growth.

A new and formidable forest worm has appeared among us towards the close of the season. Their ravages in the town east of us had been reported as seen in a maple forest, a year since, and this year also, resulting in the entire destruction of the trees. Late in August or early in September, the leaves of my door-yard maples were seen to be falling, evidently eaten off by some insect, and the attack became general, and soon the oak forest near us, on the west, was visited by armies of the spoilers, who continued their work till the natural fall of the leaves. The worm was seen crawling here and there, in the highway to the west in great numbers, and their continual droppings of shot-sized, round balls from the trees, upon the dry leaves, seemed like the noise of a constant rain. The worm is about the length of the bag caterpillar on apple trees in the spring, but is smooth, with longitudinal stripes of white and blue, with seven feet on each side of the body, one near the head, four in the middle and two near the tail. The head is an oval, bronze shape and color, and a protuberance of like appearance is at the opposite extremity. I have tried to keep them in a jar with leaves, when they are changed into a crysalis form. Among the leaves of the forest I find them burrowed for the winter. What they will do another season Providence will decide.

Salisbury, Ct., Dec. 12th, 1857. J. LEE.

For the New England Farmer.

WINTER BUTTER.

MESSRS. EDITORS:—After experimenting nearly half a century on butter-making in the winter, we have come to the following conclusion as the best way we have tried yet: viz.: As soon as the milk is strained we set the pans on the stove or some other hot place, till it is nearly or quite scalding hot; then we remove the pans into a closet near the cooking-stove where the thermometer ranges from 40 to 60 degrees night and day; then, after the cream is well risen and taken off, it is kept in the same closet till churned; an operation which takes us from 10 to 30 minutes, and gives us equally as good and yellow butter as we churn in the summer, provided we keep the cream no longer than in the summer. We have tried keeping our cream in the summer dairy-room, and sometimes it would freeze, and O, the dreaded day of churning would come, which would prove "a man's work," if not more, of from 3 to 8, 10 or 20 hours, and sometimes prove a failure, and the refractory cream would be reserved to shorten doughnuts. If we should have the good luck

to produce butter after adding hot water to the cream or immersing the red hot tongs to kill the witches, it would come as white as hog's lard, and in little detached fragments which would require expert manipulations to form it into lumps.

At present we milk four cows, and treating our cream in the above named manner, our churnings have caused us but little labor or trouble. In the Boston *Cultivator*, dated Nov. 20th, 1841, may be found the same in substance as the above:

I make no pretension to new discoveries but previous to that time I had seen no directions or recommendations for making winter butter by the above process. Every year introduces young and inexperienced farmers into action, and it is possible to such the above hints may prove of service.

SILAS BROWN.

North Wilmington, December, 1857.

REMARKS.—We have seen butter, and eaten it too, made by this process in the winter, and found it very sweet and hard, and of excellent color. We thank Mr. Brown for his statement. It comes in good time.

WHAT FARMERS SHOULD LIVE FOR.

There is something worth living for besides money. That is very good, but it is not all. With the rest, let us raise a crop of good ideas. While you are farmers, remember also that you are men, with duties and responsibilities. Live down the old brutal notion that a farmer must be uncouth, uneducated and unthinking—a mere ploddrapps.

You are brought into immediate contact with the great heart of civilization. You cannot get out of the reach of the buzz of the toiling world. The thrill of the wonder-working wires, and the rumble of the locomotive, (the thunder-tread of nations,) come to your once secluded hill-side.

Move toward a better life. Do not keep your boys corn-shelling all the long winter evenings. Make your farms a place that your sons and daughters cannot help loving. Cultivate the trees—they are God's messengers.

Care much for books and pictures. Don't keep a solemn parlor into which you go but once a month with the parson, or the gossips of the sewing society. Hang around your walls pictures which shall tell stories of mercy, hope, courage, faith and charity. Make your living room the largest and most cheerful in the house. Let the place be such that when your boy has gone to distant lands, or even when, perhaps, he clings to a single plank in the lonely waters of the wide ocean, the thought of the old homestead shall come across the waters of desolation, bringing always light, hope and love.

Have no dungeons about your house—no rooms you never open—no blinds that are always shut. Don't teach your daughters French before they can weed a flower-bed, or cling to a side-saddle; and daughters, do not be ashamed of the trowel or the pruning knife; bring to your doors the richest flowers from the woods; cultivate the friendship of birds—study botany, learn to love nature, and seek a higher cultivation than the fashionable world can give you.—*Address of D. G. Mitchell before the Connecticut State Agricultural Society.*

For the New England Farmer

A WORD ABOUT THE USE OF MILK.

My remarks, by way of illustration, toward the close of my last article, may have excited a little curiosity, and as I then intimated, may have led to a desire to make the inquiry, "what would farmers do with their milk if it were not made into butter and cheese?" This question, which was only answered in part at that time, I now propose to consider more fully. Not that woman's time is wasted no where but in connection with the dairy; for this is but a single item among many. With this however, we will begin.

I am no advocate for the use of milk by adults, as will perhaps be seen hereafter. Mr. Thacher, of Barnstable county, it is said, tried a long time, in vain, to keep his horse on milk; but I know not why adult horses should not be as well sustained on milk, except from habit, as adult human beings. "Milk for babes, stronger meat for adults." And yet there is a way of using milk in families, which, in comparison with the use of our modern abominable mixtures, would be a very great improvement. So that if I could bring society to the more general use of milk to-morrow, I should think myself, temporarily at least, quite a philanthropist and reformer.

But what is that legitimate use of milk to which the foregoing remarks refer? What is that simple method of consuming, much more generally and largely than we now do, an article which, though to everybody except very young children and a few invalids, is, after all, abstractly considered, but a second rate article of food, or even but a choice of evils?

1. Bread and milk eaten in the old fashioned way, with a spoon, is, with some drawback upon its excellence, so vastly superior to those multitudinous hotch-potch mixtures which *grace* our modern tables, that I should be glad to see three times as much of it eaten as now is. True it is that bread broken into milk and made soft by the process, excludes pratically much of that mastication and insalivation which are indispensable to the very best and healthiest digestion; but then the bread is *bread* still—the staff of life or nature's best—despite of the soaking. Besides, the use of bread and milk practically shuts the door against many of those mixtures which not only consume so much of woman's time, but rebel in the stomach. For who does not know that the bread and milk eater not only feels less powerfully impelled towards delicate and injurious mixtures, but actually has less room for them? Most certainly he who has eaten a pint of milk and half a pound of bread, has a stomach less empty than before he began his meal.

Here a question always comes up from the ignorant and unobserving, "But can men and women who labor hard live on bread and milk?" Most certainly they can live on the bread, and the milk will be no great hindrance to the full efficacy of what would doubtless be preferable without it. We know this from the nature of the case, since bread, as a general rule, is the most nutritious food in the world; but we know it also from fact. One of our most gigantic medical professors in this county lives largely on bread and milk; and more than one hard laborer with the hands, whom I know, lives in the same way. An

aged teamster, now living as I believe in Northbridge, Mass., says he can do his work better on bread and milk than on anything else. And one large family—a farmer's family—in Connecticut, were trained to almost giant size of body, on chiefly bread and milk and its products. Indeed, except butter, they used very little of those products. Some of them I have watched about fifty years, and they still hold out comparatively vigorous.

Mankind generally, I again say, at least in this country, would be healthier and happier, if they used two or three times as much milk as they now do, even if it were in a somewhat objectionable way. They might breakfast on it every day with *advantage.* They might dine on it *without loss.* I will not say that the third meal may as well be of bread and milk, after a bread and milk breakfast and dinner, for I do not think so. In general, whatever may have been the preceding meals, I would not use much milk at evening. Dry bread is far better, or at least food which is quite solid.

Think now, for once, what a saving of time this plan would secure to poor enslaved women! It would save much to her to have a family breakfast on it; but much more still to have them live on it two-thirds of the time.

2. It is indeed much better for health, and quite as productive of gustatory enjoyment, to pour a little milk—new if you please—over thin slices of bread, either toasted a little or otherwise, laid on a plate; and thus eat your bread and milk, as some jocosely say, *with a knife and fork.* Or the breakfast might consist of bread and milk, according to the old method, and the dinner of bread and milk might be eaten on a plate, according to the new or improved method.

3. If these uses of milk, (new, that is, directly from the cow, as often as possible,) should not consume the whole of the contents of the dairy, and if there is no occasion to feed out the remainder to the domestic animals—the dogs, the cats or the swine—let the number of the herd be somewhat diminished, and other animals be substituted; such as working cattle, steers, horses, mules, &c. I am not enough experienced in farming, though I had a farmer's education, to say whether it is most profitable to keep cows than most other domestic animals, in itself considered; but if woman's labor in rearing young immortals and advancing older ones is worth anything, I am quite certain that the saving of her precious time and strength by the change I have indicated would much more than compensate for any apparent or temporary loss from diminishing the aggregate of milk.

If my communications are too long, Mr. Editor, please give me a friendly hint, and they shall be made shorter. W. A. A.

Auburndale, Nov. 20, 1857.

THE MAIDEN AND THE MARINER.—A young damsel was preaching at Nantucket, and among other profound and original truths, exclaimed to her congregation that "Every tub must stand on its own bottom." A sailor, thinking to nonplus the fair parson, rose up and asked, "But suppose it has no bottom?" "Then it's no tub," she quickly rejoined, and went on with her sermon.

POINTS OF AN AYRSHIRE COW.

Would you know how to judge a good Ayrshire cow,
Attend to the lesson you'll hear from me now:—
Her head should be short, and her muzzle good size;
Her nose should be fine between muzzle and eyes;
Her eyes full and lively; forehead ample and wide;
Horns wide, looking up, and curved inward beside;
Her neck should be a fine, tapering wedge,
And free from loose skin on the undermort edge:
Should be fine where 'tis joined with the seat of the brain;
Long and straight over-head, without hollow or mane;
Shoulder-blades should be thin, where they meet at the top;
Let her brisket be light, nor resemble a crop;
Her fore-part recede like the lash of a whip,
And strongly resemble the bow of a ship;
Her back short and straight, with the spine well defined,
Especially where the back, neck, and shoulders are joined;
Her ribs short and arched, like the ribs of a barge;
Body deep at the flanks; and milk veins full and large;
Pelvis long, broad, and straight, and in some measure, flat;
Hook-bones wide apart, and not bearing much fat;
Her thighs deep and broad, neither rounded nor flat;
Her tail long and fine, and joined with her back;
Milk-vessels capacious, and forward extending;
The hinder part broad, and to body fast pending;
The sole of her udder should form a plane,
And all the four teats equal thickness attain,
Their length not exceeding two inches or three;
They should hang to the earth perpendicularly;
Their distance apart, when they're viewed from behind,
Will include about half of the udder you'll find;
And, when viewed from the side, they will have at each end
As much of the udder as 'tween them is penned;
Her legs should be short, and the bones fine and clean,
The points of the latter being firm and keen;
Skin soft and elastic as a cushion of air,
And covered all o'er with short, close, woolly hair;
The colors preferred are confined to a few—
Either brown and white chequered, or all brown, will do;
The weight of the animal, leaving the stall,
Should be about 5 cwt. sinking offal.

Celt, in Irish Farmer's Gazette.

For the New England Farmer.

CONGRATULATIONS AND SUGGESTIONS.

MR. EDITOR:—I congratulate you on the healthy and vigorous aspect of your paper. It shows, notwithstanding the times are hard, and business dull, "where there is a will there is a way," and when men set about a thing in good earnest, with good intent, it can be accomplished.

I know of no department of labor, on which a man can look back with better satisfaction, than that which advances and improves the condition of the farmer. That which teaches him to grow two spears of grass, or two bushels of corn, where but one grew before. That such instruction can be given, is demonstrated in every neighborhood, where it has been attempted, and so in relation to every variety of product the earth affords. Will any one say that there is any part of our State which is as thoroughly and successfully cultivated as it will admit of being? I think not. I know of no town—ay, no farm, in any part of the Commonwealth, in which is grown *one-half* of what it is capable of producing. Then why not force the culture? Where is the harm in so doing? Are not people as healthy and as comfortable where full crops are grown, as where meagre ones are gathered? I think they are much more so. No one need fear producing too much,

and so far as appearances are concerned, full crops appear much better than scanty ones.

But we have diverged from our starting point, *the paper*, to the soil itself. We rejoice in the name *New England*, and in the prosperity of whatever is connected therewith. We admire New England products—New England manners, and New England energy. Some of the most vigorous plants of the West were transplanted there, from the hardy shores and hills of New England. Whoever is so ungrateful as not to rejoice in his own native element, is unworthy of position anywhere.

True, our soil is hard, and our climate at times forbidding, but where do you find a better class of men, than on the genuine farms of New England? I, therefore, rejoice in the opportunity to speak well of the *New England Farmer*, in whatever position found, whether on the sands of the Cape, on the granite hills of New Hampshire, or the more fertile meads of the Connecticut. ***

December 21, 1857.

EXTRACTS AND REPLIES.

CRANBERRY MEADOWS—POULTRY.

I have a meadow of about two acres, oval in shape. The soil is a black muck, ten or twelve feet deep in the middle; it has been mowed every year, and flowed every winter. I have been trying to get it into a cranberry meadow for some years past, by flowing. There are several beds of vines now scattered over it, but only one of these beds has ever borne any, and that is the one nearest the edge.

In the centre of the meadow water stands six or eight inches deep during the summer. I cannot see as flowing has done any good towards spreading the vines. I had concluded to gravel it over this winter, as I thought it was too wet; but some advise me to keep it flowed a year or two and then drain it. It can easily be drained, as gravel is close by. What shall I do to get it into a cranberry meadow?

Is it a good plan to keep dough or grain before hens all the time, or is it best to feed them regularly? H. A. C.

Uxbridge, 1857.

REMARKS.—The question about the meadow we will leave to those having more experience than we have had on that subject.

We think it best to feed poultry once a day, giving them in the morning about as much as they will eat before night.

LEATHER CHIPS.

How can *leather chips* be manufactured into manure? THOS. O. JACKSON.

Plymouth, 1857.

REMARKS.—Leather contains valuable fertilizing qualities, such as gelatine, albumen, and from the fatty matter in it, ammonia. Brown's "American Muck Book" states that the most economical mode of using leather shavings is to "chop them up into small pieces, and scatter them uniformly over the surface of the ground, at the rate of twenty to thirty bushels to an acre, and plow them in. If kept constantly covered with moist earth, they will impart their fertilizing influence to most of our cultivated crops for six or seven years. If desirable to expend, they may be dissolved in strong solutions of potash or sulphuric acid, and administered in the form of a liquid manure. They are applicable to nearly every variety of soil, but appear to be best adapted to those that are sandy, gravelly or light."

AN EXPRESSION, AND AN INVITATION.

More than five years have elapsed, since I subscribed for the weekly *Farmer*, though at the time I thought I would take it only for six months. But I have not seen the moment since when I thought I could spare it. The column you devote to "Extracts and Replies" is very interesting and profitable to me. We, as small farmers, among the green hills of Vermont, may learn much from each other. FREEMAN.

Northfield, Vt., 1857.

REMARKS.—We are obliged to "Freeman" for his good opinion, and especially for an invitation contained in another portion of his letter to "visit him and become acquainted with his family." This is precisely what we enjoy, and what we profit by largely, and whenever we are in that neighborhood, shall avail ourselves of the opportunity to look at the "farm he has cleared, and taste of the products he has raised with his own hands."

DRAINS AND SEWING MACHINES.

I wish to inquire if there is any better way of digging drains than by the use of spade and pick? I understand that *Pratt's Ditch Digger* has been successfully used in New York, and not long since I read of a gentleman who uses it to dig a trench to set his fence posts in, as he thinks it is an easier way than to dig holes for them. Has it ever been tried here in New England, and if so, with what success?

What is the comparative value and cost of stone and tile drains? Will not Mr. French please to enlighten the readers of the *Farmer* a little upon these points, as we suppose that he knows everything about draining.

I also wish to make a few inquiries about the cheap sewing machines. There has been quite a number of kinds advertised, varying in price from $10 to $45; are any of them really good and valuable machines, and if so, which is the best? It seems to me that if a good sewing machine could be obtained at a moderate price, it would soon pay for itself in almost any family.

Lancaster, Dec. 22, 1857. E. G.

REMARKS.—We think Mr. French will cheerfully reply to "E. G."

A LARGE EGG.

Mrs. J. M. Hix, of Manchester, Vt., has a medium sized hen that lays very large eggs, and all double yolk, but one in particular that I saw and measured reached the size of seven inches in circumference, the smallest way, and nine the

largest. This may be thought a large story by some, and, indeed, I think so myself; but the egg is preserved for future reference, and can be seen by any one who wishes to have ocular proofs of the fact. HIRAM BUTTERFIELD.

Bendville, Vt., 1857.

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PROFITS IN RAISING GEESE.

I have not seen anything in the *Farmer* concerning the profit of raising *Geese*, and I will make a statement of mine. In the first place, my stock consists of one pair only—the gander is the White Mountain, its mate is a Bremen. She commenced laying about the first of March, and laid twelve eggs. The 4th of May she came off with ten goslins, who ran with her ten days, when I separated them, so that she might lay her second litter, which she never fails to do. The young require a little care for a few days, and then they will take care of themselves. I fed them with corn meal and scraps till the 7th of July, when I dressed them, and the next day carried them into Boston, and sold them to Mr. Coggins, at Quincy Market, for $15; their average weight was 11¼ lbs. I did not make the statement thinking of boasting, but simply to show that there is a profit in raising these fowls. I did not keep an account of the food which they consumed, but it cannot amount to a great deal in that length of time. The feathers will amply pay for dressing them, and as for marketing, I think it will pay to visit the city once a year.

South Hanson, Dec., 1857. S. D.

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PROGENY OF ONE COW SINCE 1852.

In October, 1852, I purchased a fine five year old native cow, and in February following she produced twin calves. The two next years she produced one at each birth; the fourth year she produced twins, and on the 27th af November last, which is the fifth year, she produced *triplets*, which is an increase of nine calves in five years, at five births. HOLLIS CHAFFIN.

Dexter Asylum, Providence, R. I., Dec., 1857.

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PATENT OFFICE REPORTS.

Will you please to inform me through the columns of the *Farmer* where I can obtain a copy of the Patent Office Report on Agriculture, and how much it will cost when delivered?

S. Framingham, 1857. E. H. COOLIDGE.

REMARKS.—Write to the member of Congress from your district to send you a copy, and he will undoubtedly do so.

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POP CORN.

Will some one inform me what kind of manure is best to plant common pop corn with? I have tried to raise it two seasons, and failed. Is it best to soak the corn or not? How would it do to plant this corn with potatoes, both in one hill? A SUBSCRIBER.

Dec. 16, 1857.

CONSOLATION.—A miserly old farmer, who had lost one of his best hands in the midst of haymaking, remarked to the sexton, as he was filling up the poor fellow's grave, "It is a sad thing to lose a good mower at a time like this; but, after all, poor Tom was a dreadful great eater."

For the New England Farmer.

MISERIES OF FARMING.

While reading the piece thus headed, I have been trying to picture to myself what kind of a man the one that wrote this must be, but I have not been able to come to any conclusion what kind of a picture to draw of him.

I acknowledge with him that the earth spontaneously brings forth thorns and thistles; but God has given man power to cultivate the soil; has given him the horse and ox, and with his skill he applies the strength of these, to useful and profitable purposes. Man cultivates the soil, not as a beast of burden, not as E. H. S. would indicate, harnessed with his horse or yoked with his ox, but with an intelligent mind, a cheerful heart and willing hand, and receives a rich reward for his labor.

As to farming being the most laborious business there is, I feel free to say it is not so, as having tried mechanical, mercantile and farming pursuits, I think I am prepared to judge correctly. I never yet found the place where there was not hard work to be done, but I have found a great many that did not like to do it, and I suspect E. H. S. is one of them. As for pleasurable excitement, there is more in one day on the farm than in one month in the store or shop, and it is just such excitement as the mind requires for health and activity. What is more pleasing than a stock of fine cattle to look upon in the every day rounds? there is the sprightly colt, with his graceful manœuvres around the field; there are the sheep and playful lambs. And what is more exciting and pleasing, than following that good eagle plow drawn by a pair of well trained oxen or horses, rolling the sod over so smooth and even?

What class of men has more time and better facilities for cultivating and improving the mind, than the farmer? I have yet to learn of that class. There is plenty of work for a cultivated mind, even on a small farm. In regard to the comfort and ease of the manufacturer, the mechanic and merchant, I would refer E. H. S. to the present pinching times; ask him to contrast their situation with that of the farmer.

Oxford, Nov. 10, 1857. W. L. D.

PIGEON CATCHING.

Few persons, perhaps, are aware how many wild pigeons are taken at the West, and brought to the eastern markets, or how much they contribute to supply the demand for flesh. Mr. T. N. TAYLOR, of Plymouth county, and one of a company engaged in the business, informs us that one of his associates "caught the past fall, in two months, or less, *one thousand seven hundred and twenty-six dozen*, or *two hundred and seven thousand and twelve pigeons*." Enough, certainly, to make a good many pigeon pies, in the hands of a skilful cook.

MANURES FROM ABROAD.

In a private letter from one of our most observing and intelligent correspondents, is the following paragraph: *"In the matter of manures we need a reform. This State, in its* LIME *and* MUCK, MARL, *&c., contains, I have no doubt, in herself ample means of restoring all the lost fertility of her lands. These are among the most durable of all manures. Why then purchase from abroad those expensive ones, whose effects, at best, are often doubtful?"* We give the paragraph prominence, because its truths are of more importance to the mass of our farmers, than any thing we can utter beside. There *must be a reform* in the matter of manures, for they are the keystone upon which rests all the farmer's success.

We have no desire to discourage the use of specific manures by those *who can afford to fail in an experiment;* they are undoubtedly useful in degree, and it is well for us all to know their intrinsic value. But the common farmer cannot afford to test them, only in a small, uncertain and unsatisfactory way, and, we fear, that when his hopes of good results from his crops *rest on them,* his mind will be diverted from the only true and natural way of fertilizing his land—namely—from the sources which the land itself affords. Some of these sources we hope in the course of the year to be able briefly to point out.

For the New England Farmer.

MIXING OF PLANTS.

MR. EDITOR:—In a late *Farmer*, I notice that your correspondent, *Essex*, in some remarks upon squashes, says:—"An inquiry has often been made, how is the purity of the squash preserved?" and then goes on to say, "I have never met more sensible remarks on this point, than the following, which I quote from a report on vegetable products about to appear, in the *Transactions of the Essex Agricultural Society for* 1857, as follows."

"It is a mistake to suppose that the seed of the squash is pure, because the squash itself has all the outward characteristics of purity. The crossing of varieties, as in the apple and pear, and all our fruits, is not in the pulp, but in the seed; and were the squash vine like our trees, perennial, no matter how near other varieties might grow, the fruit would always be constant; but when we plant the seed, be it of squash, apple, or pear, then the result of growing in the vicinity of other varieties, at once shows itself in point of all degrees of purity, though the seed planted may have all come from one squash."

Your correspondent says this doctrine may, in some manner, explain the vexed question, "will seed taken from squashes yield pumpkins? and *vice versa.*" Now, nothing is more certain than the crossing of different varieties of the same species if one is fertilized with the pollen of another. But it is a well known fact that the cross has no effect upon the fruit of the present year, but appears in the next generation raised from the fertilized seed. This is a law in the vegetable economy, which should be familiar to all farmers and horticulturists. What thousands of dollars are annually lost by planting seed not true to their kind. Dealers in seeds should never purchase any for sale, unless they know they are raised by persons understanding this subject.

Your correspondent remarks, "I had supposed these vegetables, (pumpkins and squashes) to be as different in their nature, as are the African and European in the human family." Undoubtedly they are so, but they are of the same species, and susceptible of being crossed, and a new variety produced. And so of the human race, they are of the same family, and therefore varieties exist.

Plants of one *genus* cannot be crossed with those of *another*, but remain distinct. There is no changing of the nature of any plant, or animal; yet there are those who insist that wheat turns to chess, and becomes worthless as a grain. But the doctrine that wheat turns to chess, and Indian corn to mullen, rests on untenable ground. A man has not the power to change the nature of any created thing, but science gives him a most interesting power to originate new varieties of animals or vegetables, by crossing the breeds of the same species. But the integrity of the Creator remains the same, and the awful impress of the Creator's hand which was stamped upon every order of organized life, in the beginning, will go down, unimpaired, to the end of life.

Dec. 3, 1857. LYNNFIELD.

REMARKS.—"Lynnfield" will observe that we have omitted one or two illustrations in his article, but we can assure him that it was *not* because we disagree with him in opinion, but because it might lead to a discussion not congenial with the purposes of this journal.

DELEGATES TO U. S. AGRICULTURAL SOCIETY.

At a recent meeting of the Massachusetts State Board of Agriculture, held in this city, the following gentlemen were elected delegates to attend the annual meeting of the U. S. Agricultural Society, which is to be held in Washington on the 13th of January next, viz.: Hon. Marshall P. Wilder, Charles L. Flint, Esq., John Brooks, B. V. French, Moses Newell and Samuel Chandler. As important matters, affecting the interests of the Society as well as the cause of agriculture throughout the country, are to be discussed, it is expected that there will be a large attendance at the meeting.

We hear that Major Poore, the efficient Secretary of the Society, has received the final report of the Committee on "Agricultural Machinery and Farm Implements" at the recent exhibition at Louisville, Ky., and can reply to the numerous "anxious inquiries" made by exhibitors.

Applications have been made to have the next exhibition of the Society in Baltimore, Md., and Chicago, Ill. Those and such other applications as may be received will be acted upon at the annual meeting.—*Journal.*

WHITE DORKING FOWLS.

None of the live stock of our country is so generally cultivated and appreciated as our domestic poultry—and no other affords so handsome a profit on the capital invested. Without the presence of cocks and hens and chickens, the farm would be incomplete. Whoever knew a sturdy man, a loving woman or an affectionato child, that did not find pleasure in visiting the poultry-yard, and in feeding, tending and cherishing its occupants? It is sometimes said that fowls are stupid, but that expression is not from those who observe them closely. Were they ever found off guard when searching for food in the fields? What means that warning note from the cock, and that rush to the protecting cover of some friendly tree, or hedge, or fence? Their motions were so sudden that they seemed more like a flash than anything else. But what was it for? No dog or prowling cat is near—all is as still as the chamber of death,—and yet some impending danger has struck terror into all! Not a chick is seen where numbers quietly chirped to the mother's cluck a moment before! What means the inverted heads of those standing under the tree—there must be danger in the skies! Ah! I see it. Away in the clear empyrean, floating like gossamer on the air, or gracefully sweeping across the heavens, may be seen the cause of all this alarm!

Do fowls ever fail to find your choicest spot of ground where your crocuses and pinks and pansies bloom and shed their fragrance? If they care not for what blooms above, they well understand what crawls beneath, and how they can procure it! But we must not go farther. Are they stupid now?

After a trial of various breeds of domestic fowls, we have come to the conclusion that the Dorkings, beautifully represented in the cut above, are as good as any, if not the best fowls among us. They are of good size, good layers, good mothers, of remarkably good habits and manners while living, and when dressed for the table will suit master and mistress too. Their "meat is fine, their bodies are large, and better proportioned

than any others, being long, full and well fleshed in the breast; have short legs and beautiful plumage, and with five instead of four toes." The feathers on many of them extend down the legs to the crown of the toes.

For the New England Farmer.

FRUITS AND FRUIT JUICES.

Fruit juices, it has been said, are the milk of age; thus contradicting, as some may at first think, the views in my late article in this paper, on the use of the milk of animals.

But is there, after all, any contradiction? I think otherwise. My main object, in that article, was to show the folly—aye, and the wickedness, too, if you please—of requiring woman to spend so much of her vital energy in changing milk, which, when new from the cow, is comparatively good food, into butter, which is worse, and cheese, which is *much* worse; and all without any compensation. When you boil a farinaceous article, as the potato, or chestnut, or the wheat kernel, there is at least an apparent gain; and so there is in cooking several of the other roots besides the potato; as well as the winter pear, the quince, and some of the other fruits. But in cooking milk, so to call it, there is no compensation; but at every step, a loss. Even in boiling it, I suppose its usefulness, unless as a medicinal agent, is somewhat impaired.

It will hence, as I trust, be clearly seen that it was no part of my object, in the article alluded to, by commending milk, to throw anything else into the shade; above all, such an important item of human aliment, as I conceive fruits to be; but simply to persuade people to substitute milk for its products, and thus at once save themselves and their housekeepers, and practice good sound roundabout economy.

But all this does not militate at all against the ancient adage, "Milk for babes, stronger food for adults," or the more modern one above alluded to, that fruits contain the milk of adult life. On the contrary I have taught the latter doctrine, both by precept and example, now about a quarter of a century.

Some have supposed not only that fruits and fruit-juices were preferable, for all but children, to milk; but that there was an incompatibility between them. Thus Dr. Dewees, of Philadelphia, in his great work for mothers, says that children under two years of age should never use any fruit. It is true he does not tell us why; but it is quite natural to suppose it is because milk and fruit are not apt to go well together.

My purpose, at the present time—in addition to making the above explanation,—is to commend to all my countrymen who have passed beyond the merest threshold of infancy, the use of fruits, as a part of their daily food. Fruits are said to be "gold in the morning, silver at noon, and lead at night;" and I always prefer to have them used in the early part of the day. Nevertheless, when the supper is taken early, and is not a bad one in quality or quantity, a small proportion of fruit is occasionally allowable, such as a baked apple or two, or a few strawberries or huckleberries.

The fruit juice may be expressed into "Pharaoh's cup," or it may be eaten in the pulp where Nature formed it. I prefer the latter. It may be eaten alone, or with bread—and it may be uncooked or cooked. Bread and fruit form one of the best meals for laboring men and women which can be found. If bread is the staff of life at every age, fruit-juices are its wine, especially in its middle and at the end.

Many say they cannot eat fruit. The teacher of one of our most popular female seminaries, one day not long since, told me this story. "My father," said he, "could eat fruit all day long, as it were; but I can hardly eat so much as an apple, without suffering from it." "Perhaps," said I, "your father ate too much fruit, and thereby so deranged his system that he has transmitted to you a greatly enfeebled vitality. But tell me *when* you eat your fruit." "Why, usually after dinner, or sometimes before a meal." "Did you never eat a good mellow apple along with your dinner, just as you would a potato?" "No, never!" "Try one then, tomorrow." "I will."

I have heard no more from the Professor, but have no doubt that by making fruit a part of his meal, instead of eating it when he had already eaten enough of something else, he has been able to use it not only without *unfavorable reports*, but even with great advantage.

Is it needful that I should say it ought to be well masticated? The stomach has no grinding apparatus or gizzard; and it 's no wonder if they who swallow large pieces of crude and even hard apple, without chewing it, have trouble. Every particle needs to come in contact with the saliva, as much as every particle of a crust of bread.

A lady in West Dedham—a pillar in one of the churches there—is so much attached to a bread and fruit diet, that she seldom if ever goes abroad to a meeting or a concert for females where refreshments are taken, without carrying with her some apples and a piece of bread. She is now about threescore and ten, and has pursued this course for twenty years or more; and is likely to do so for many years to come.

Here, as your readers will see, is another indication of good to come, on behalf of our housekeepers. They who can make a meal of bread and apples once or twice a day, require no boiling water to cleanse their dishes; nor any long array of culinary apparatus in cooking. They have a sort of independence of which the world that has not yet attained to it has no conception. Besides, they acquire a renovated appetite, and their gustatory enjoyment is increased from tweuty to fifty per cent. W. A. A.

Auburndale, Jan., 1858.

"D. S, G———n," Derry, N. H., will please accept our thanks for his kind invitation. We shall improve the first opportunity to accept it.

For the New England Farmer.

THE BERKSHIRE AGRICULTURAL SOCIETY.

My attention has just been called to an article in the December number of the *Farmer*, in reference to the history of this Society, the conclusions of which I cannot suffer to pass without comment. These conclusions, although justified by the unexplained circumstances which appear on paper, are unwarranted, I consider, in fact, and unjust in their spirit. I confess, that I have perceived with regret and surprise, on more than one occasion, the exhibition of an apparent purpose in the *Farmer* of impugning the claims of the Berkshire Society, and of detracting from the fame of its projectors.

No controversy has ever existed as to the nominal priority of an association in Middlesex County *called* an "Agricultural Society." The old "Massachusetts Agricultural Society" had, I believe, a still greater antiquity. Mr. Watson, in his History, adverts to one, if not both of these organizations, as having an existence antecedent to the Berkshire Society. Had they, however, for practical purposes, any other than a mere paper existence? In reference to the Massachusetts Society, Mr. Watson remarks in a public address: "It will be peculiarly grateful to every member of this society to know that the *mother* society in this State is at length aroused from her lethargy, *cautiously treading in your footsteps.* The week ensuing they will exhibit *their first cattle show at Brighton.* They are blessed with respectable funds for years accumulating, *but of no practical use to the community thus far.*" (Memoirs Elkanah Watson, p. 454, 2d edition.) Will the courteous and intelligent editor of the *Farmer* assert that these remarks did not apply with equal or greater force to the character of the Middlesex Society? That society had doubtless a chartered name, but did it exhibit any vitality? Had it impressed any stamp upon the husbandry of the county, had it accomplished any act that communicated progress or improvement to the cause of agriculture or domestic manufactures? Had it infused any enthusiasm, any zeal, any increased effort, any salutary emulation in the agricultural community? Had it in truth any other than a mere paper existence, such as distinguishes some of the benevolent institutions of the present day, who adopt vigorous resolutions without exhibiting any correspondent action? Was the Middlesex Society known or heard of beyond its own circle? Did it present any programme of premiums, or had it any public exhibition? Agricultural societies under that designation were no novelty even before the charter of the Middlesex Society existed.

The friends of the Berkshire Society pretend to no priority of date, but rest their claim for its pre-eminence upon its originality, its novel and peculiar plan, upon the efficiency and vigor of its operations, which imparted to its action the highest practical usefulness. The measures of the Berkshire Society were original, peculiar and potent, by which the interest and pride of individuals were excited, and competition and emulation aroused. It engaged the public attention, enlisted the popular sympathy, gave to the farmer a joyous festival, and elevated and dignified by its tendencies the profession of Agriculture. It stimulated science in agriculture and promoted the introduction of improved breeds of animals.—These features formed the distinguishing characteristics of the Berkshire Society, and made it the model and exemplar of all succeeding societies in the Union. These facts constitute its indisputable claims to regard and veneration. In this aspect it asserts novelty and originality. It was the first agricultural society not only of Massachusetts, but of the Union, in its special form and in its peculiar mode of operations.

I was present at the first and many succeeding fairs of the Berkshire Society, and occupied a position which rendered me familiar with its measures and history. I recall the presence of numerous conspicuous and intelligent men, on these occasions, from the eastern sections of the State, and can distinctly recollect the high encomiums they were wont to express on the measures of the Berkshire Society, and on its novel and attractive system, but never heard an allusion to the existence of the Middlesex Society. John Adams, who was himself at one time President of the Massachusetts Society, in a letter addressed to Mr. Watson, ascribes to him the character of "father of American agricultural societies." (Ib. p. 238.) Had the advocates of the Berkshire Society asserted its claims to priority and originality as the *first* agricultural society formed on the *modern and improved system*, there would have been no confusion, and no controversy could have occurred, for their position would then have been impregnable. This high and enviable attitude they may fearlessly assume, and they may point with just pride to innumerable societies scattered over the whole breadth of our broad country, whose system and operations retain the model and reveal the lineaments of their common mother, and who unhesitatingly trace their origin to the humble society of Berkshire. Can the Middlesex Society present a record so glowing and honorable?

The article I have referred to, justly ascribes to Elkanah Watson prominence in the projection and formation of the Berkshire Society, but he had efficient and patriotic coadjutors, some of whom yet survive. Is it evincive of gratitude or justice, to deprive any of these patriots of even a single leaf from the chaplet of their well-earned fame, in an attempt to assert the prior claim of a society which seems to have had a mere nominal existence, without vitality or usefulness?

An effort, on ground like this, to invalidate the claims of the Berkshire Society, appears to me very like, (comparing small things with great,) an attempt to disparage the merits of Columbus, because the Northmen may possibly have made earlier voyages than the great Genoese to this continent.

JUSTICE.

REMARKS.—In the above article, the writer seems to us to manifest feelings which are wholly uncalled for by the subject or the occasion. He makes an allegation against the *Farmer*, the truth of which we not only do not admit, but which we deny in the most unqualified terms. So far from its having been "our purpose to impugn the claims of the Berkshire Society, and detract from

the fame of its projectors," *we have always endeavored to give full credit* to this Society, for its efficient and well-directed exertions to advance the cause of agriculture, and we have always looked upon its distinguished founder, not only with esteem and respect, but even with admiration and affection. Having travelled extensively in his own and in foreign countries, and having carefully observed their condition, he removed into Berkshire in 1807. He immediately perceived the wants of the agricultural community around him, and set himself to work to arouse the farmers to a sense of those wants, and to devise the best methods of supplying them. In his patriotic labor, he spared neither pains nor expense. In 1807 he obtained the first pair of merinos ever introduced into Berkshire. In the winter of 1807-8, he addressed the farmers of Berkshire on the subject of the spread of merino sheep. In these first essays, he says in his "History of Agricultural Societies on the Berkshire System," "the following extracts were an *introduction to the subject of establishing an Agricultural Society.*" One sentence from these "Extracts" is the following: "The most certain and direct road to effect this great object, it appears to me, will be the organization of An Agricultural Society."

In 1808, he introduced an improved breed of swine into Berkshire. In the same year, he purchased a young bull of a celebrated English stock, with a view, as he says, "of ameliorating the breed of cattle." In August, 1810, he wrote an appeal to the public, which he procured twenty-six farmers to sign, and appointed a cattle show to be held on the *first* of the following *October*, at Pittsfield. This show was subsequently held, and [on the following winter, 1810–11,] he says, "we were incorporated into an agricultural society." He was appointed or elected President. On the 24th of September following, a cattle show was held, which he opened by an address. Of this he says,—"Having spoke in public, and feeling the awkwardness of my situation, standing before the multitude I had been principally instrumental in assembling, as a visionary projector,—it was with infinite difficulty I could command my nerves, to commence and proceed in my address." It began thus, "On this *first occasion of our meeting as an Agricultural Society under the sanction of law*," &c.

Here we have, in the words of its projector and founder, an account of the *origin* and *first* meetings of the Berkshire Agricultural Society.

Now, then, let us look at the origin of the Middlesex Society, and it seems to us to be merely a question of dates, to be decided by the records, and one upon which there is no more occasion for the exercise of feelings of jealousy, than there is upon any other question of dates and figures.

The Massachusetts Society for Promoting Agriculture was incorporated in 1792. In December, 1793, a circular was issued by some members of the Massachusetts Society, residing in Middlesex county, inviting other members to meet at Chelmsford, on the 6th of January, 1794, "to lend their aid in forming such measures as shall appear calculated to promote, and in general to improve the 'Husbandry of the county.'" The meeting took place on the day appointed, and an association was formed, and the following preamble to their rules and regulations adopted. After referring to the recommendation of the State Society, which had led to their meeting, they say, "We, the subscribers, members of said society, dwelling in the western part of the county of Middlesex, being desirous of furthering the laudable designs of the said society, and promoting to the utmost of our power the Husbandry of our county, do hereby associate together and form ourselves into a society, for the purposes above expressed, by the name and style of the Middlesex Husbandmen, and do adopt and agree to the following rules and regulations."

On the 3d of February, 1794, the newly-formed society issued another circular to many gentlemen in the county, inviting them to become members. On the 27th of October, 1794, the society again met, and passed resolutions completing their organizations, *appointing committees, receiving communications upon agricultural subjects, &c. &c. These meetings were continued two or three times a year.* In 1799, Rev. E. FOSTER, of Littleton, delivered an "Oration on Agriculture." In the winter of 1803–4, the society was incorporated, and in *October of that year, the first Board of Trustees* was appointed under the act of incorporation, consisting of Oliver Prescott, Timothy Bigelow, Ebenezer Bancroft and Abel Fletcher.

Now it seems to us that not another word is necessary to settle this long mooted question. The case, as the lawyers would say, is fairly made out. The only question that has ever been raised by us, is clearly settled by the dates themselves, and we would not say another word, only that the writer of the above has raised an entirely different question, and thrown out various insinuations, entirely foreign to the true question. The question which he discusses relates to the comparative merits and measures and usefulness of the two societies. Even the elder Watson looked with feelings of paternity upon the society which he had organized, and was disposed to speak somewhat slightingly of societies previously existing. He said, in the autumn of 1816, in an address referring to the State society, "they are blessed with respectable funds for years accumulating, but of no practical use to the community thus far." Whether this was generous

or just we will not attempt to decide. Perhaps it was pardonable in one who had spent much time and thought in devising and carrying into operation a plan of his own, which was well adapted to the wants of the community in which he dwelt, and which has proved eminently successful. But because his plan was a good one, it by no means follows that no other plan could be good. We will not attempt a defence of the State society,—it is able to take care of itself. The results of their labors constitute their best defence. A part of these results may be found in their *dozen volumes*, filled with the most useful scientific as well as practical matter, a considerable portion of which we understand is about to be re-published in a new and attractive form. Nor are we called upon to answer, fully, the insinuations that the labors of the early members of the Middlesex Society were of little value to the county or the country. The highly cultivated fields, the beautiful gardens, the orchards loaded with fruits, and the superior stock that grazes upon the hills of this county, furnish, perhaps, all the answer that is needed.

If "Justice" had investigated and ascertained the early character of the Middlesex Society, he would have found its affairs conducted by men of learning and intelligence, aided by the practical, hard-working farmers of the county; he would have found them meeting often for discussion, comparison of notes and the reception of *written* reports; found committees appointed and charged with duties as important as those entrusted to them at the present day. Besides all this, they made annual reports in writing to the State society, which speak for themselves now, and which are models of excellence. We also have reason to believe that exhibitions were held by this society previous to the year 1810. Does this look as though the Middlesex Society had no other than "a mere paper existence?"

But we confess that we are unable to see what connection these things have with the question under discussion. If it is proved, as it has been most abundantly, that the Northmen visited this continent before Columbus was born, we do not see how this disparages the merits of the Genoese navigator. Whether his discoveries or theirs were followed by the most important and permanent results, is another and entirely distinct question, and we can see no logical connection between them. Whether the Middlesex or the Berkshire society was first organized is one question. Which was constructed upon the best plan, which has been conducted with the most efficiency, or followed by the best results, are entirely distinct questions, and we have not acuteness enough to discover any necessary connection between them.

For the writer of the article which has called forth these remarks, we have no other feelings than those of the highest respect and the warmest regard, and with this expression of our feelings we must dismiss the subject.

For the New England Farmer.

LETTER FROM CONCORD, MASS.

It is refreshing in these times of panic and poverty, to know of one factory where there is no discharging of help just as winter is coming on, nor any "half-time" or "half-pay." The mill in our village has kept straight along, and will continue to do so. A few weeks ago, a fire broke out on the roof, near the belfry, which threatened for a time to stop the mill forever. The fire-engine was speedily brought to bear upon the flames, which were soon subdued, much to the joy of the whole village.

Each family connected with the mill was presented with a fine turkey for their Thanksgiving dinner by the owners. The pay-day is once a month. I saw a poor fainting girl brought out of the weaving-room this afternoon into the fresh air. She was struck on the head by a shuttle that leaped from the loom. A few days ago, a "card boy," a little "off his guard," lost the tips of some of his fingers in his machine.

Wood-cutting has commenced again in the neighborhood. One Samuel Haynes had an ancle badly crushed this week by a tree that struck another, and jumped from the stump.

I have not seen the first ice-car go down the Fitchburg railroad this fall. I suppose the India war, and the dulness of trade in Boston, will check the demand for ice this winter.

I have banked my house on the north side with saw-dust again. It is quicker done than with dirt, and more effectual. Besides, the clapboards are not stained as with soil. It is good economy to put up extra sashes upon windows in exposed places. Wasting fuel is wasting money.

Between this time, and the first of April, I intend to enjoy my comfortable workshop in stormy weather. I have a long tin pan in which I oil my harness. I have a box of awls and thread, and often illustrate how "a stitch in time saves nine." About a house and farm there are a great many repairs and little improvements needed. If one is remote from mechanics, this work can only be done by having a shop and tools. W. D. B.

SIZE OF FARMS IN AMERICA.

In the wheat region, south of Lake Ontario, the farms are usually from 150 to 200 acres in extent, though many are much larger. The farm-houses are roomy and comfortable, impressing one favorably with the condition of the occupants. The female members of the family have ample employment in the cleaning and cooking departments, and the table at the different meals is loaded with a profusion of dishes. House-servants are dispensed with as far as possible. Butcher-meat appears at breakfast, dinner, and supper. The Americans no doubt eat a vast deal too much of such stimulating food. Indeed, I do not think that any class in England consumes so much butcher-meat as all classes do here. It is

a remarkable circumstance that farms have a tendency to decrease in size more rapidly where the land is poor than where it is rich.—*North America; its Agriculture and Climate, by Robert Russell.*

SCIENTIFIC FARMING.

We take the following extract from a pamphlet by Mr. T. Dyke Acland, recently published in England:

"If we consider on what powers of nature human food depends, it is surprising how many departments of knowledge may contribute something to the result. How plants grow—and how animals feed—why some thrive and others are stunted—are questions as yet imperfectly answered; but they are the subject matter of the science of Physiology; a science, the comprehension of which implies an accurate knowledge of Chemistry and of the general principles of Natural Philosophy. The constitution of the soil, the varieties of strata, are taught by Mineralogy and Geology. Draining, in its present advanced state, depends on the laws of Hydrostatics. The economy of farm labor requires the skilful application of the laws of Mechanics. These are all matters of fact, plain, broad and palpable, entering into the simplest arrangements of a well-conducted farm. But if we go on to more delicate subjects, how much is the produce of the farm affected by the principles of Heat and Light, perhaps of Electricity, by the complicated agencies of climate included in the province of Meteorology! To the subject already named must be added the diseases of vegetables and animals, and the intricate questions involved in the art of high-breeding. In addition to what belongs to agriculture as a food-producing art, the farmer requires knowledge of the principles which affect the rates of wages, profits, rents — principles taught by Political Economy, but having a most important bearing on the question, 'Will it pay?'"

Although we would not argue that every farmer should endeavor to become a Meteorologist, Electrician, etc., or, as Professor Mapes says, study medicine with the view of being his own doctor, or law to obviate the necessity of employing a legal practitioner a few times during his life, or theology with the *sole* view of rendering the clergyman a supernumerary, still we cannot help thinking that all general information, and the more exact the better, has a very material tendency, if properly applied, to prove conducive to the farmer's best interests. Every cultivator desires to obtain from the soil, at the slightest expense and injury to the source of production, the largest amount of crops. In order to accomplish this result, unless his means are very limited, there are few intelligent men who will dispute the necessity of being familiar with general principles in the various departments of his profession. The man who grows crops should understand the nature of soils, which certainly includes more research than would enable him to arrive at the sage conclusion that one is sandy, and another clayey, etc. Then what should be the extent of the farmer's education? Who will answer the question? One person is found fault with for being too scientific, another for being too practical. Now suppose these two classes of gentlemen would shake hands with each other, having as their motto *Practice and Science*, and casting away the baneful influence of prejudice, seek to gather and apply knowledge for its own dear sake, we might hope for rapid progress in mental acquisition, national wealth and prosperity. If the farmer were not placed in such close proximity with almost every department of science, in a word, with Nature's endlessly beautiful and diversified works, it would not be difficult to define what should be the extent of his education. Let us apply truths as fast as discovered, and not find fault with the man of science because he cannot supplant the Divine Architect. Although it would be impossible for any agriculturist during his natural life to study any one department bearing on his calling to its fullest extent, still we do not ourselves, and are afraid never will, possess the necessary information to advise when he should cease to explore, and grieve over the exhaustion of the realms of knowledge.—*Working Farmer.*

For the New England Farmer.

THE THINGS I RAISE---NO. 6.

MYATT'S VICTORIA RHUBARB.

This is a large, and perhaps on the whole, the best variety, though it is not as high flavored as some, and is more acid. Large crops can be raised with proper attention. It is necessary to transplant often, or thin out in some way, as the stools become large and the stalks will consequently be small. It will bear manuring very heavily. It should be put, if possible, on rather moist, though not wet land. I consider this crop a profitable one for the market gardener.

LINNÆUS RHUBARB.

This is a newer and smaller variety than the preceding, and better in quality, though less profitable for market. It is some days earlier than the Victoria. Should recommend it for home use.

SEYMOUR'S SUPERB CELERY.

A very fine variety growing large and solid. I have raised it three feet long, and blanched twenty-two inches high, white as snow. This plant requires a rich, moist, well-pulverized soil, and should be kept well hoed and free of weeds, but not earthed or hilled up until three or four weeks before it is dug. I am aware that this is contrary to usual practice, but nevertheless a very good way, the best in my judgment. Let it be tried, and each one judge for himself. I am confident they never will return to the old method of hilling up during the season, and thus causing the celery to rust and become worm eaten.

COLE'S DWARF CELERY

Is a dwarf variety of very good quality, grows short and quite stout. I treat it in the same way as the above named sort.

DRUMHEAD SAVOY CABBAGE.

This is a hybrid, a cross between the Drumhead and Savoy, having the size and shape of the former, and the curly appearance and good quality of the latter. I regard it as *one* of the most, if not *the* most profitable cabbages grown. They head remarkably well, not surpassed in this respect by any except the Winnigstadt. I have grown it three or four years with uniformly good

success. It did better than any of twelve sorts I raised this season, and I do not hesitate to say that it is not surpassed as a market cabbage by any variety I am acquainted with. I think it is difficult to procure true seed, though it may be had at some of the seed stores. I raise my own seed.

GREEN GLOBE SAVOY.

A very nice variety of cabbage, being very curly and of fine flavor. It does not head very well. It is exceedingly difficult to get good seed, judging from my success for a few years past. It does not usually grow large, and in shape is somewhat conical. For home use it is one of the best, if pure seed can be had.

LATE DUTCH CAULIFLOWER.

I have given this sort a fair trial, and am satisfied it is a good one. The seed was obtained of Nourse & Co., Eagle Warehouse, and was good; almost every plant produced a head, which is rare, unless the seed is good. The cauliflower is one of the most delicious vegetables known, and is not properly esteemed. It is far superior to the best cabbage ever raised. JAMES F. C. HYDE.

Newton Centre, Dec. 22, 1857.

YOUNG WOMEN'S PART IN LIFE.

There is something in a pleasant faced damsel which takes a young man's eye—whether he will or no. It may be magnetism. It may be the sympathy of that which is beautiful in men's natures for that which is lovely in women's. The women have great power over the sex called sterner. Particularly so, if they be young, pretty, and marriageable. Young women! do you know that it is you who are to mold some man's life? Have you ever thought of the responsibility that attaches to you long before you are married? A word you may say to a young man whom you may never marry nor even see a second time, will possibly exert an influence over his life that you don't dream of! A smile does wonders in lighting up the dark corners of a man's soul—a word in the right place may electrify his whole being. A wrong influence will do more damage in a single instant than a life time may correct. *The fashionable extravagance* of a large majority of the young women, *in town and country*, frightens young men away from all intention of matrimony, leads them to look upon the whole sex with distrust, and drives them to scenes where they are not bound hand and foot by the unreasonable demands of wives who would spend faster than they could make. And the fact that this tendency shows signs of increase makes the case worse. The fever of fashionable dress, the ignorance of housewifery accomplishments, the lack of the peculiar home-virtues that are calculated to make a home lovely—infect the villages now-a-days as they do in the city.

When an earnest, energetic, hard-working, sensible young fellow, who is in search of a wife, sees this, he fears and hesitates, refuses to marry at all perhaps, and so does only half the good he could in the world—simply because he has no notion of fulfilling the homely but very truthful adage which tells of placing a man's nose continually upon the grindstone. We commend the subject to the regards of our young women readers. Let them cultivate the domestic virtues—make themselves true women—know a woman's duties—cherish their hands less and their intellect more—and their lot will be happier and better. More than this, they will find that there *are* mates in the world for them, and those worth having. Will not mothers bring the true mode of life before their daughters in the light in which it ought to be shown—which is nothing more than that of *common-sense*. That is the rarest of virtues; more valuable because there is comparatively little of it to be found.—*Germantown Telegraph.*

For the New England Farmer.

TOBACCO.

It may be known to some of your readers that one of the staples of the Connecticut valley is tobacco, and yet few know any thing of its culture. I propose very briefly to give my experience.

Tobacco seed is the smallest that I know of. It is said that a thimblefull will produce plants enough to set an acre. About 3500 plants will grow upon an acre. Fresh seed is best, but seed five years old will grow, though it will take longer to germinate. As soon as the frost leaves the ground, select a rich, warm, sunny place, for a seed-bed. Some sow in the fall of the year with good success. The plants are thinned, weeded, and watered freely till about the middle of June. Then begin to set in squares about three feet apart. Finish setting previous to the 4th of July, hoe, worm and sucker the crop all you can afford time, till the 1st of September. From then, till the frost comes, cut the plants up by the roots and hang them bottom upwards in barns and sheds. No other care is requisite till the damp, rainy weather of early winter, when, if sufficiently dried it is taken down, stripped, sorted and packed. It is then ready for market. The product of an acre under good cultivation is often 2000 lbs. Tobacco likes a rich, heavy loam, though it will do well on lighter soils if thoroughly manured.

At the present time, the tobacco growers are generally stripping the stalks.

From curiosity, I weighed one of my largest plants when first cut, when ready to strip and after stripping, with the following result:

The whole plant, green	7¼ lbs.
The whole plant, dried	2½ "
The leaves, without the stalks	¾ "

Some people have conscientious scruples about raising tobacco, and class the business with gambling and rum-selling. There is room for argument on both sides of the question. One thing is sure—it pays well, and that is the chief end of all labor. More anon. JAMES NEWTON BAGG.

West Springfield, Nov. 17, 1857.

FINE HOGS.—Mr. GALUTIA HEATH, of Concord, Mass., recently slaughtered a hog 14 months old, which weighed, when dressed, 575 pounds.

Mr. C. P. BLAKE, of Epping, N. H., slaughtered six, all of one litter, whose average age was 16 months, and which weighed as follows: 427, 497, 625, 525, 530 and 340 pounds! making an aggregate of 2,944 pounds.

For the New England Farmer.

SWITZERLAND.

LETTER FROM MR. FRENCH.

My Dear Brown:—If I had the least idea here I am, my letter should commence with the usual date, but probably no map contains the name of the "Hotel de l'ours," up by the north side of the Gemmi Pass in Switzerland. The place that has a name, through which we last passed in coming here from Interlaker, is Kandersteg, a mile or so from this Hotel of the Bear. We have all heard of the corners of the earth, and people sometimes speak of the end of the road, but I never fully realized the force of the terms until now. We drove horses until we found no passage farther. We got into the gorge of the mountains till a carriage could proceed no longer, till the road ended at this same house, and now when it stops raining, we are to mount those gallant animals called mules, and cross the mountain pass, where there is room enough to ride, and where there is but a step of three feet width on the face of the precipice, we are advised to walk. When it stops raining, "Ay, there's the rub!" Here it is the 9th day of August, and the weather just now is such that I am sitting with my hat and a large shawl on, shivering with cold, in a house where there are no stoves or fireplaces, except one in the kitchen. I can look out at the window and see the mountain tops white with snow, and I can imagine you and the rest of New England sweltering in an August sun; but Shakespeare or somebody intimates that a man cannot wallow comfortably in December's snows "by thinking on the genial summer's heat."

For comfort, a man's home is the best place, but if his object is to see Switzerland, propably my present position is preferable to old Exeter. Yes, here is Switzerland, with her mountains piled Alps upon Alps till the snow lies basking in the sun all the summer long, and finds in her cold bosom no answering thrill of warmth to all his ardent wooing. And close past the door rushes a foaming mountain torrent, cold from the glaciers this very morning, roaring, and leaping from precipice to precipice, in haste to find the fair, warm valley below. Strawberries are just in season here, grown on the wild hillsides. Abundance of trout find their way from their native element to our table, taken from the stream which never dries, but increases more and more by summer's sun.

Yes, Switzerland is here, out at my window, where the mountains rise almost to the clouds; almost did I say?—at this moment while I write, as I turn my glance towards them, their heads are veiled by the white clouds that have been just thrown over them by their servants, the winged winds. Last night I sought, as I always do, when far from home, for the constellations which from youth to manhood I have watched at evening, for the stars, which of all things created change not, which look kindly and peacefully down upon our upturned faces in age as in youth, which when a thousand leagues are between us and our loved ones, are to us and them alike, when we watch them from the steamer's deck in the midst of the pathless sea, or from the mountain peaks of the Alps, the same now as when they sang together for joy at the first creation. Last night I sought to bid them good-night from this valley, but the walls of rock which guard the mountain stream rose up almost to the zenith on the East, and the West was hidden by the mountain peaks. The Great Bear and the North Star, however, were in their places in view, and the Cross was overhead, and so satisfied that the great landmarks of the Universe had not been removed, and feeling that the same Heaven was above me and my friends in my native land, I sought and found repose.

There is much of poetry still about Switzerland, with more of sober prose. A glance at her mountain fastnesses, and at her cottages scattered upon her green hills rising almost to the eternal snows, explains why she can never be subdued. As well might a disciplined army wage war against the chamois on her rocks, as against the Swiss hunter, more fleet even than the mountain deer.

I saw, this morning, a mountaineer who had brought the baggage of a traveller a six hours' journey across the Pass of the Gemmi, keeping pace with the fastest walker of an English party, and far outstripping the horses and mules of those who rode. I tried the burden which he bore so lightly partly on his head and partly on his back, and found it almost beyond my strength to lift, and was told that the same man could easily carry two hundred pounds, and keep pace with any traveller along those frightful paths, for the whole six hours.

There is patriotism left yet in Switzerland.—Tell and his brave exploits are pictured not only on his chapel, which I saw by Lake Lucerne, where he leaped from the boat, leaving his captors to buffet the storm as they might, but on the walls of hotels and of cottages; and the spirit of Tell was found not to be sleeping when Switzerland was recently threatened with invasion.

But freedom and poverty ever go hand in hand; freedom and a hard, ungenerous soil, seem to be the compensations set against each other by nature's equal law. Although Switzerland is the land of the vine, and although her hills and valleys are adapted to the culture of as great a variety of fruits and other products as any other country in the world, yet she is and must ever remain a poor country. Her institutions are free, her children are well educated, but her soil

is sterile and hard, and her population is already too great to subsist well upon the small proportion of arable land within her borders.

In the midst of the last paragraph, the sound of many voices singing the wild notes so peculiar to the Swiss, called me down to the common room of the hotel. About fifteen young men and maidens from the neighboring village of Frutigen had come down for a visit, and were sitting round a long table, which was covered with bottles of wine and glasses, singing in their own language, which is, I believe, a sort of German, the songs of their native hills. Some of their music was very striking. The peculiar falsetto which we have often heard in the streets in America, from the Swiss singers, is the characteristic of their songs. A wild, loud chorus, like the warbling of a lark as he mounts heavenward, closes almost every stanza. The strangers, guests in the house, thronged around and contributed to the payment of the bill for refreshments by laying a few shillings in silver on the table, to which no objection was made. At the close of one of the songs, one of the men, who appeared to be the leader of the band of singers, turned to us and inquired in pretty good English, if there was any American in our number. I replied that I was an American, and the only one in the house. He said, "I am an American too, and I am glad to see you, sir." He took me by the hand, and held me a long time, seeming really affected at the meeting. The music was hushed while he informed me that he was born in Switzerland, but was taken to America, to the State of Ohio, by his father, who bought a thousand acres of land there, that he had lived in America fifteen years, and had returned nine years ago to Switzerland to live with a wealthy uncle; that his father had died, but his mother and brothers and sisters still remained prosperous, where he hoped soon to join them. He said he had seen but three persons who spoke English in all the nine years, and he repeated many times, "I am glad to see you, sir, I am glad to see an American." He said he had been naturalized, and asked, "How does our new President get along with the government?" He asked me to drink wine with him, and standing in the midst of the Swiss singers and several English gentlemen and ladies, we touched our glasses, according to the custom of the country, and drank to the sentiment which I proposed, and he repeated to his friends, "The free countries, America and Switzerland." I afterwards had a few minutes' conversation with him alone, and asked as to the condition of Switzerland. He says the government is good and the people intelligent, but that they are poor. The land is generally owned by those who till it, but they have usually but three or four acres; that many of the farms are mortgaged to gentlemen in Berne, and the owners have great difficulty in paying their interest, and so they struggle on in poverty. He says many have been injured by strong drink, and that the number of paupers is very great, and is a heavy tax on the people.

It is manifest at once to the traveller that there is great poverty in this land. At almost every step old men, women and children are begging for alms. A great many persons of both sexes are seen with large swellings on the neck, some of them almost frightful in size. It is not uncommon to see two or three women thus afflicted in a company of half a dozen of the decent, respectable population. It is attributed by many to the use of the snow water which comes down from the mountains. Whatever it may be, it is a sore dispensation upon the people of Switzerland.

I have referred to the use of wine in these wine-growing countries. Two kinds are in common use, the red and white. They are kept for common use in casks like cider, which they very much resemble in taste and in strength, though I think the common white wine here has not so much intoxicating effect as common cider of New England. It is at some hotels put on the table without extra charge, a pint bottle to each guest. The common price of the cheap wine is about twenty cents a quart bottle. The same wine is kept a year or two, and sold under different names, at three or four times as much.

I called for different kinds at one small hotel on the road, and the charge was twice as much for one as the other kind, and the landlady confessed, upon my telling her that they were the same, that all the difference was that the best was a year the older. The hotel cards offer wines at all prices, from twenty cents to two dollars. The cheap wines are in very common use, and in my judgment are infinitely better than the stupifying beer of the English and Germans.

Wine-making is becoming a considerable business in America, and the question whether the use of light wines tends to promote temperance or intemperance is open for discussion. With a view to this question, I have made it a point to test the wines in common use where I have travelled. Leaving myself at liberty to refer to the subject again, I will close abruptly at the end of my paper. Your friend,

H. F. FRENCH.

MORTAR.

The ancients made a kind of mortar so very hard and binding, that it is now found to be almost impossible to separate the parts of some of their buildings. The lime used in these harder mortars is said to have been prepared from the very hardest stones, sometimes from marble.

Fine sand makes weak, and coarse sand strong mortars, and the sand should be washed before mixing, to obtain the large grains. The lime should be thoroughly burned, and perfectly white. The principle on which it hardens is, that the lime absorbs carbonic acid from the air, and hardens, forming a concrete round the grains of sand. It was customary to mix with the lime and sand, chopped straw, but cow's hair has been substituted; this is only introduced to cause it to bind together, and prevent cracking in the drylng. It is only used for the prime coat.—*Scientific American.*

EXTRACTS AND REPLIES.

WATER PIPES.

I have laid about two miles of log pipe, to furnish the city of Portland with water. The fountain head is not sufficient, and another pipe will be laid down. I wish to know whether clay pipe will do, and what pressure it will bear. The pipe can be made here. JOHN S. HAWKINS.

Portland, Oregon Ter., Nov., 1857.

REMARKS.—We have no doubt but clay pipe will answer for aqueduct purposes; that is, to convey water from a fountain down hill, by its own gravity. But common, soft burned clay pipe would not bear much pressure; we have no data at hand to show how much; nor can that be done with any certainty, as there would be so much difference in the pipe itself. We have no doubt, however, but you can use good clay pipe for common aqueduct purposes, and find them durable and economical.

—

ROOTS FOR STOCK, AND MACHINES TO CUT THEM.

You will very much oblige *one*, and perhaps many of the readers of your paper, by giving your opinion as to the best method of preparing turnips, carrots, ruta-bagas, &c., for food for stock. Also, by giving a description of some of the best machines for cutting such roots, with cost of machines, and any other information relating to the subject. S.

West Salisbury, Vt., Dec., 1857.

REMARKS.—At present, with the high prices of fuel to cook roots in common boilers, and the want of some simple, cheap, yet effective mode of *steaming* them, we think roots may be most usefully fed to cattle in a raw state. But they should be cut into such pieces as to become easy to get at for the animal, whether it be horse, ox, cow, sheep or lambs. To accomplish this we use now, daily, *Willard's Patent Root Cutter.* A figure of this machine, together with a description of it, may be found in the Monthly *Farmer* for December, 1857, and we believe no man who feeds out many roots *can afford* to be without it.

—

HOW TO RAISE POP CORN.

I will inform your "Subscriber" how to raise p p corn. Plow the ground well; put one shovel full of manure in each hill, or spread four shovels full to each hill, and harrow the ground; soak the corn in copperas water, allowing one table spoonful to one peck of corn; hoe three times, and you will have a good crop of corn, if the weeds are kept down and the season is only tolerably faithful.

My father raised marrowfat squashes and good white beans, planted the fourth day of July, and both got ripe. SOPHIA.

Methuen, Dec. 28.

—

LARGE CROPS OF CARROTS.

In the *Farmer* of this date is a speculation by Mr. D., of Hopkinton, wherein he thinks it will be in his power to raise 2000 bushels, or 50 tons of carrots, to an acre, in the course of another year. Having had some experience in the culture of the carrot, and never having witnessed the growth of more than 35 tons, or 1400 bushels, to an acre, in one season, he will excuse me for saying that what he states is "much easier said than done." From the success with which he has cultivated small parcels, year after year, I cannot doubt, with proper care in fertilizing and clearing his grounds, he will raise as many as any other man; but I will venture to pay double price, on delivery in Boston, for all that will grow, fit for market, under any circumstances, more than 40 tons, or 1600 bushels to the acre. Even Mr. B., of M——, with his first-rate land and inexhaustible supply of manure, has never come up to this. ARATOR.

South Danvers, Dec. 26, 1857.

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A PRETTY GOOD PIG.

Capt. Willard Worcester, of this place, slaughtered a pig Dec. 21, which weighed, May 30, 17 lbs.; when dressed it weighed 280 lbs., making a gain of 263 lbs. in 205 days, or a trifle more than 1¼ lbs. per day.

The pig was kept on sour milk entirely until Sept. 1. During September a small quantity of meal was added. The remainder of the time, up to slaughtering, it had what meal it would eat.

Shirley Village, 1857. W. B. B.

REMARKS.—Please send the "sketch of farming operations," to which you allude.

—

HOLDFAST, OR BONE WEN.

The enlargement of the bone on the jaw of the ox is something that I want information upon. I have been obliged to kill several cattle with this trouble. I want to know the name of those bunches, the probable cause, and remedy, if any. I will state what I have heard and what I think about them. Holdfast and bone wen are the names I have heard given. Cures are spirits turpentine, or spirits turpentine and sulphur mixed, applied externally; cutting them out and knocking the tooth out immediately opposite the bunch. I never have practised any of the above cures much, and never knew a cure to come under my observation. I think they are frequently caused by a bad tooth, and if that be the case, the removal of the same might be a cure. The bunch always is near the roots of the teeth. I should like to hear all the facts any one can give in regard to the above. A SUBSCRIBER.

East Jaffrey, N. H., 1858.

THE SNOW.

The following beautiful Poem will commend itself, if not to all lovers of poetry, at least to all such as have passed their early days in a country home. Who of us does not remember the excitement among the "younger folk," on waking of a Winter morning and finding roof, and tree, and window, covered with snow—the *first snow!* And here we have the picture all spread out before us. Why, we half fancy the poet must be describing the very gate, and post, and wood-pile that we knew in "old lang syne!" Even the "bristling cock" greets the dawn with a voice quite familiar to our ears.

But the Well—ah, the well should have a *sweep* instead of a "crank," to make the picture perfect.

RALPH HOYT, the writer of the poem, has done enough in this single production, to entitle himself to high rank in the scroll of poetic fame. He is a clergyman, we understand, and a resident at one time of New York city, where we believe he published a volume of poems, of which this was one. The volume we have never seen. We find the poem in the beautiful volume entitled "The Poets of the Nineteenth Century," recently published by the Harpers, and also in their *Monthly Magazine.*

THE SNOW.

BY RALPH HOYT.

The blessed morn has come again:
The early gray
Taps at the slumber's window pane,
And seems to say,
"Break, break from the enchanter's chain,
Away,—away!"

'Tis winter, yet there is no sound
Along the air,
Of winds upon their battle-ground,
But gently, there,
The snow is falling all around,
How fair—how fair!

The jocund fields would masquerade;
Fantastic scene!
Trees, shrub and lawn and lonely glade
Have cast their green,
And joined the revel, all arrayed
So white and clean.

E'en the old post that holds the bars,
And the old gate,
Forgetful of their wintry wars
And age sedate,
High-capped and plumed, like white hussars
Stand there in state.

The drifts are hanging by the sill,
The eves, the door;
The hay-stack has become a hill;
All covered o'er,
The wagon, loaded for the mill
The eve before.

Maria brings the water-pail,
But where's the well!
Like magic of a fairy tale,
Most strange to tell,
All vanished,—curb, and crank, and rail,
How deep it fell!

The wood-pile, too, is playing hide;
The axe—the log—
The kennel of that friend so tried—
(The old watch-dog,)
The grindstone standing by its side,
All now *incog.*

The bustling cock looks out aghast
From his high shed;
No spot to scratch him a repast,
Up curves his head,
Starts the dull hamlet with a blast,
Then back to bed.

The barn-yard gentry musing, chime
Their morning moan;
Like Memnon's music of old time—
That voice of stone!
So warbled they—and so sublime
Their solemn tone.

Good Ruth has called the younger folk
To dress below;
Full welcome was the word she spoke;
Down, down they go,—
The cottage quietude is broke,—
The snow!—the snow!

Now rises from around the fire
A pleasant strain;
Ye giddy sons of mirth, retire!
And ye profane!—
A hymn to the Eternal Sire
Goes up again.

The patriarchal Book divine
Upon the knee,
Opes where the gems of Judah shine,—
(Sweet minstrelsie!)
How soars each heart with each fair line,
O, God! to Thee!

Around the altar low they bend,
Devout in prayer!
As snows upon the roof descend,
So angels there
Guard o'er that household, to defend
With gentle care.

Now sings the kettle o'er the blaze;
The buckwheat heaps;
Rare Mocha, worth an Arab's praise,
Sweet Susan steeps;
The old round stand her nod obeys,
And out it leaps.

Unerring presages declare
The banquet near;
Soon busy appetites are there;
And disappear
The glories of the ample fare,
With thanks sincere.

Now let the busy day begin;—
Out rolls the churn,
Forth hastens the farm-boy, and brings in
The brush to burn;
Sweep, shovel, scour, sew, knit and spin,
Till night's return.

To delve his threshing John must hie;
His sturdy shoe
Can all the subtle damp defy;
How wades he through!
While dainty milk-maids, slow and shy,
His track pursue.

Each to the hour's allotted care;
To shell the corn;
The broken harness to repair;
The sleigh t' adorn;
So cheerful, tranquil, snowy fair,
The WINTER MORN.

ESSEX COUNTY TRANSACTIONS.

This annual is again before the public, filling nearly 200 pages, with much readable and useful matter. Through the watchful care of the intelligent and industrious Secretary, ALLEN W. DODGE, the members find an ample reward for their investment in this annual publication.

First comes the Address of Dr. KELLY, of Newburyport, of more than thirty pages—a paper of no ordinary merit—combining the pleasant and the useful in agreeable proportions. This address shows much research, and a good share of practical experience and observation.

Then follow the reports on the various subjects entrusted to committees; some of them full of useful hints and valuable instruction; others bare skeletons giving a mere outline of awards, without a single fact or suggestion of any sort in them. Among those which will hereafter be referred to, as containing valuable instruction, are those on farms, by Mr. LORING, of Salem, and on farm implements, by Mr. PROCTOR, of South Danvers. Both these papers show a degree of attention in their authors, worthy of commendation. Then follows an Essay by Mr. FLAGG, of Andover, which, like all other emanations from his pen, will be found to contain valuable instruction, chastely and beautifully expressed. The report on *Vegetables*, by J. J. H. GREGORY, of Gloucester, is an excellent paper. The reports on "Milch Cows of Native or Mixed Breed," by JOSEPH HOWE, and on "Heifers" by WM. R. PUTNAM, are also papers worthy of preservation, and afford instruction.

We shall have occasion to refer to this report again, and to extract from it some of its valuable pages. The Essex County Society is doing great good, and is worthy of its honored founder, the late TIMOTHY PICKERING.

For the New England Farmer.

PUMPKINS FOR MILCH COWS.

MR. EDITOR:—I observed the following statement in the *Farmer* of the 19th inst. "It has long been an unsettled question with farmers, whether pumpkins fed to milch cows, were actually beneficial." Last September, I had a young cow that I kept in a lot where there was a large supply of the best of feed. I commenced feeding her daily with shorts; increasing the quantity until I gave her some four quarts per day. I noticed that she did not appear so anxious for grass as formerly. I do not know as the quantity of milk was materially increased. After feeding in this way some ten days, I stopped giving the shorts, and the quantity of milk remained about the same. The cow appeared to eat more grass. I have often fed shorts in the winter, and am now doing it, receiving a decided increase in the quantity of milk in every case.

Now is not the truth of the case, in relation to most kinds of feed for stock, somewhere in this direction?

If you give a cow pumpkins, carrots, turnips, or shorts, when they have a plenty of nutritious feed, and thereby diminish their capacity or disposition to partake of their feed to the usual extent, you cannot reasonably expect to receive the benefit of the extra feed over and above the product of the usual feed. A cow cannot eat all you can lay before her; and if she did, she might be unable to digest it properly.

Give a cow that is kept on straw, a plenty of good hay, and it is reasonable to expect more milk. But if you give her a very little hay each day, and that hay begets such a disrelish for the straw that she will not eat it, she will do the best on a plenty of straw. So I believe that feeding pumpkins, potatoes or shorts, will not be productive of an additional quantity of milk, when it withdraws the appetite from the usual food, or when the cow thereby eats the value of the extra feed less in hay.

One cow may have digestive power and appetite for the extra feed in addition to the usual feed, and will probably give more milk, unless the extra feed tends to fat or flesh. We cannot make every good cow a machine to transfer any kind of feed into milk or fat, as we please. The best we can do, is to observe their tendencies to milk or fat, and feed accordingly. There is a difference in animals that will not be overlooked by the careful farmer. J. Q. A. W.

Addison, Vt., Dec. 21, 1857.

UNDERDRAINING WITH TILE.

I am glad to see so many inquiries in regard to tile drains. It looks as though farmers were waking up to the benefit of underdraining.

I will make a few inquiries. If the bottom of the drain is very hard, and the descent not too great, will not the horse-shoe tile do, without soles?

Should the dirt be thrown in immediately on the tile, or should a course of small stone be placed above it?—J. W. LEQUEAH, *Frenchtown, N. J.*

In reply to the above inquiries, we copy the following from a late English work:

"Draining tiles and pipe have been made in a great variety of forms; of these, the earliest since the introduction of thorough draining was the horse-shoe tile; so called from its shape. The horse-shoe tile has sometimes been used without the addition of any sole or flat to form the bottom of the drain; but there cannot be any question of the impropriety of such false economy. Even the most obdurate subsoils become soft when exposed to the action of air and water; after which the edges of the tile are apt to sink, and thus destroy the drain. Various devices have been fallen upon to prevent such an accident, and yet to save the expense of laying the drain throughout with soles; such as providing the edges of the tile with flanges, or using only pieces of soles on which to rest the ends of the tiles; but all these plans are open to the most serious objections. They all leave the bottom of the drain unprotected against the wearing action of the water, and they all leave the conduit exposed to the entrance of the burrowing animals which in-

fest our fields. In every case, therefore, in which the horse-shoe tile is used, no consideration of economy ought to prevent the protecting of *every portion* of the bottom of the drain with soles or some other substitute.

In laying horse-shoe tiles, they should be made to rest partly upon two adjoining soles, or to break bond, as it is called. The object of this proceeding is to prevent, as far as possible, the chance of any sinking taking place.

In forming this kind of drain, the bottom of the trench must be of the same width as the sole, which is generally an inch wider than the tile. The bottom of the drain must be carefully smoothed, so that the soles may lie flat, and close to the bottom at all points. It is advisable that a little straw, or some other fibrous material, be placed upon the tiles before the earth is returned into the drain, in order to prevent the loose soil from entering by any of the crevices."

For the New England Farmer.

HAY CAPS.

My old friend of the *Ploughman* is out again in a long article against hay caps. He cannot bear to let them lay in quiet through the winter in the garret. His reasoning on the subject is almost as strong as it would be to say that because a man could not live sealed up tight in a glass case, that would just fit to him, it is dangerous to wear a hat.

As I have probably used hay caps longer than any other farmer in this part of the country, and as they have saved me a good deal of labor and money, I feel at all times like defending them against the objections raised by men who have never used them.

The best argument I can use in favor of hay caps, is, that I have never known a man to use them one season that did not like them or that laid them aside. They are in common use here. I have about 200 of them, and they are frequently all, or nearly all, in use. When I do not want them all, my neighbors who have not enough, are glad to use them. I use them for hay, grain and stalks, and find them very useful for all.

The kind I like best are made of four foot cloth torn into squares, with a loop in each corner, and four small sticks about twenty inches long each, one to hold each corner. I do not want them oiled or hemmed or painted, or anything else done to them. If it is asked why I would not have them oiled or painted, I would say that it is a needless expense, as there has not been a storm hard enough to wet a cock of hay through a good plain cap well put on, as much as a heavy dew would, since I have used them. As to the work of putting them on, I will go into the field with any man of my ability to work, and *put up hay and cap it, as fast as he can turn it up*, so that it will do without a cap, as it takes twice the work to trim a cock without a cap that it does with a cap. I have tried the weights at the corners, but I prefer the sticks to the weights on two accounts. First, weights heavy enough not to blow off, (half a pound to the corner,) are heavy to carry about, and then the sticks bind the hay together and keep the cocks from blowing over, or the tops from blowing off.

A cap four feet square will cover a hundred weight of hay, 16 sheaves of oats, 10 of wheat or 8 of stalks, and keep them perfectly dry on the top as long as you please to keep it on. Hay standing on moist land, will gather moisture from the ground if left to stand long, either with a cap or without one.

If my friend Buckminster will come up to Hollis some morning after a hard rain in hay time, and examine our hay that has been capped and that which has not, if he does not agree that caps are worth having, I will pay his fare, divide my dinner with him, introduce him to some of our best farmers, show him some of our best farms, and make his visit as pleasant as I can.

E. EMERSON.

Hollis, N. H., Dec. 26, 1857.

PARSNIPS AS A FIELD CROP.

We copied into the *Rural* last spring, an article recommending the field culture of parsnips for stock, and thought we would try the experiment in order to satisfy ourself on the subject. We accordingly sowed side by side of our mangel wortzels and carrots a few rows of parsnip seed, and tended them as we did the other roots. The soil was the same in all respects. The parsnips were more easily wed out and tended than the carrots, because they came up with a broader leaf and were more easily distinguished from the weeds. They grew luxuriantly—many of them as large, at the crown, as a man's arm, and running down so deep, that if the Chinese on the other side of the earth had suspected their opportunity, they might have drawn them through for their own benefit. The result was that the same quantity of ground gave us twenty per cent. more of parsnips than we harvested of carrots, and about an equal weight with the mangel wortzels. We have dug one-half of them—only twenty bushels—for winter's use, and the other half we have left in the ground to be taken out in early spring as a fresh and delicious repast for the new milch cows then. They are improved by being kept in the earth through winter. This is an additional recommendation in their behalf.—*Rural Intelligencer.*

HINDRANCES TO AGRICULTURE IN MASSACHUSETTS.

MESSRS. EDITORS:—Your New Hampshire correspondent omits one item that, in this vicinity, does much to retard the spirit of progress and improvement in agriculture. That is, a proper use of capital that should be invested in the business. It is quite the custom in these three "river counties," as we call them, for the "old folks" to accumulate all the money they can, by the sale of their sheep, cattle, wood and timber, and eventually the farm itself, and invest the proceeds in some stocks of banks, insurance companies, or western lands, for two reasons—1st, to dodge the tax collectors and assessors; and 2d, to get an extra per cent. for the use of their money.

The consequence is, not that their business lacks the eclat of respectability, but that their sons must follow the dollars, and you may find them scattered all the way from the nearest railroad station to the farthest verge of Kansas and

Nebraska. Within the last seven or eight years hundreds and thousands of dollars have been invested in this way. The legal interest of Massachusetts is only six per cent., while that of New York is seven, and some of the western States ten and twelve per cent. The temptation to send away is strong, and growing stronger every year. Time was when a young, active and prudent man could borrow any amount of money on good real estate security, from our moneyed men. Now the thing is almost an impossibility; and there is but little encouragement for young men to remain in this section on that account alone. Still farming is a paying business in our hill towns, where farms have depreciated in price nearly one-half in ten years. I have in mind now a man who purchased a farm of 170 acres on credit, some six years ago. By labor and good management he is now pretty much out of debt, and has 25 or 30 head of cattle, 70 sheep, colts, calves, poultry, &c., belonging to such a place, and in a fair way to have money at interest.—*Country Gentleman.*

For the New England Farmer.

AGRICULTURE IN NEW ENGLAND.

MR. EDITOR:—It has been a long time since I have written an article for the *Farmer*, and now, as formerly, I write more for information, than to impart instruction. And I not only wish you to pardon me for the many questions I shall ask, but wish you to answer them.

1. As I have headed my article, "Agriculture in New England," I first wish to know *your* opinion, Mr. Editor, as regards the profitableness of agriculture in New England. Can it *generally* be made profitable on our old, worn-out soils? Say on farms so far back from the sea-coast that sea manure is altogether impracticable?

2. If such farms can be made profitable to their owners, please to state how, in your opinion, is the best way to manage them. *Manure* seems to me to be the essential item to successful agriculture on such farms. And now comes the important question—Where the land is worn-out we cannot, as I see, keep stock enough on it to bring it up. Consequently we must purchase manure of some kind, in order to bring said land to a state of fertility that will pay remunerating prices for labor bestowed on the same; must we not?

3. Now the question with farmers in this vicinity is this: Will it pay for us to buy manure? If so, what kind or kinds will pay the best?

4. Which will pay the best on a farm, say two miles from a village; to sell milk delivered at village, for four cents per quart, or make butter that will sell for twenty-three to twenty-five cents per pound?

5. On a farm that will summer, say five cows *well* on grass alone, will it pay to keep *six*, and give them all a little meal, daily?

6. Does it pay well to raise vegetables for marketing?

7. Can our New England farmers make dependence on the Chinese sugar cane for sweetening?

8. Does it, as a general thing, pay for farmers to keep dogs?

9. Does it generally pay for farmers to raise pigs to sell, at eight weeks or so old?

10. What breed of hogs is best for us to keep?

11. Can we find a better breed of cows than can be selected from our old native stock?

12. Can the Guenon treatise be fully relied upon in selecting dairy cows?

13. What kind of harrow is best for very rough land?

14. Will it pay for a small farmer to purchase a roller? Please to state what you think of rollers, anyhow.

Perhaps I have wearied your patience with the above inquiries, but I do certainly hope you will answer them all. We want your opinion on them all. JOHN DIMON.

Carolina Mills, R. I., Nov. 10, 1857.

TO MR. JOHN DIMON.

Your communication upon "Agriculture in New England," was sent to me a month ago by my friend Brown, with a request from him that I should reply to your inquiries, and I now embrace my earliest leisure to answer them.

1. It may, without hesitation, be said, that farming can, generally, be made profitable in New England. True, some mistakes have been, and are still committed, but in spite of them all, we have certain evidence that the business is profitable. We may look with pride and satisfaction at the comfortable and happy families which are reared on our New England farms: they are generally well educated, certainly in the common, and often in the higher branches of learning, trained to moral and industrious habits, and fitted for various pursuits; and perhaps, in addition, received considerable legacies from the estate of the father, or are comfortably set out in the world by him in his lifetime—all more or less directly resulting from the earnings of the farm. Their early years are passed in a healthy climate, somewhat rigorous to be sure, but adapted to give tone to the constitution and energy to the character. They scatter abroad over our country, planting New England institutions, and generally proving the bulwarks and ornaments of society where they go. We may look again at the comfortable farm houses, "amid the old ancestral trees," the farm-buildings, fences, and other fixtures, the highways of trade and of travel, the school-houses, academies, churches, and various other advantages and adornments of established and cultivated society, which these farmers have contributed to procure, which make New England what it is, and which are in fact a part and parcel of what I buy of you in purchasing your farm, or sell to you when you buy mine. We can buy land, in a new country, for a small sum; but the various things above enumerated are not a part of the purchase; and when we have contributed our share towards procuring them, our new establishment has become a large investment. Among the profits of farming in New England, we may with propriety reckon the healthy climate, the various conveniences of living, and of rearing a family, amid the desirable influences of well-established and cultivated society.

2. You speak of the worn-out farms. True, many of them have been closely cropped, and require a considerable outlay to restore the original fertility. But this can be done by degrees, and so as to come within one's means. Then, too, our markets are larger, and in the main bet-

ter, and more easily accessible than formerly; the obstructions to tillage are, to a considerable extent, removed from the soil, and many improved methods and implements of tillage have, within a few years been invented, by which we are enabled to cultivate the land more thoroughly, and to rapidly restore, and not unfrequently exceed, its original fertility. The mistake has been in selling off the products of the land too freely, and investing the surplus at interest, or in stocks, &c., thus neglecting to give back enough to the soil to supply the waste it has undergone in bearing those products, so that the farm has been gradually losing its fertility, and has not, on the whole, been as profitable to the owner as it would have been under a more generous usage. You are, therefore, quite right in attaching the importance you do to manure, for the profitable cultivation of such a farm—though, perhaps, you do not realize how much of the article can be made on the farm. Almost every farm can supply, within itself, the necessary materials for manuring it well, if the owner knows how, and is willing to manage them to advantage. Let me now, as you request, briefly indicate to you some of the ways in which you can manufacture compost manure, and bring your farm up to the desired state of productiveness.

Collect the waste vegetable substances, wherever found on the farm or by the roadside, and place them in the yards and sheds, to become mingled with the manure and to hold its liquid and volatile parts. These substances may consist of leaves, turf, the wash or rich soil collected in hollows and ditches, brakes, bushes of one year's growth, swamp muck, refuse straw and stalks, &c., &c. They can be gathered at various times during the season; and where the practice of collecting them is systematic, the accumulation becomes, in the course of the year, large and valuable, without being expensive.

Make a tight plank trench in the stable, behind the cattle, say twenty inches wide and four deep, and during the foddering season fill the trench daily with swamp muck, or mould and leaves from the large rich hollows in the woodlands, or fine rich soil collected in low places, anywhere. A dry warm place should be provided, near the stables, that will hold a number of loads of material for the trench, and filled in the fall or early winter. If muck is used, it should be that which was thrown out of the swamp at least a year previous, and if it has lain on dry ground and been exposed to the air for two years, it will be still better. Thus the muck becomes very dry and fine, is light to cart and to handle, is a more perfect absorbent of the liquid and gaseous contents of the trench, has to a large extent parted with its acids, and can therefore be used in much larger quantities in proportion to the manure mixed with it, and will still make better compost than when used in a green and wet state. The compost being thus made a little at a time, daily, is perfectly intermingled, and ready for use without overhauling, the action of the manure being immediate and powerful. The labor expended in making the compost, is very much less than would be supposed by one who had not tried it, and the pile in the spring will be large.

You may probably find your account in keeping four or five shoats annually—say take March pigs and feed them till nine or ten months old. Make them a covered pen, in a convenient place to receive the litter from the horse stable. Muck, turf, leaves, &c., should be thrown into the pen, a load or two at a time and frequently, which the pigs will mingle with the manure. It is well to put in a variety of materials, muck alone often becoming too wet and miry for the thrift of the pigs. There should be a feeding apartment connected with the compost pen, and it should be kept perfectly clean. For say five pigs, the compost pen may be about ten or twelve feet wide and fifteen feet long, as the manure will be more valuable if kept thus compactly, than if spread over a large surface. Four or five March pigs can be kept quite cheaply through the summer, on the wash of the dairy and kitchen, together with the garden trash, and cheap vegetables, and a small daily allowance of meal. Through September and October, they may be fed more freely on peas and oats or other grain, ground and mixed with cooked vegetables; and through November and December, the feed may be cooked corn and cob meal, with a few ears of corn once a day. The pigs, if of a good breed, fed thus, will by the first of January dress from 275 to 300 lbs. each, and cost from six to seven cents per pound, and will have made at least thirty loads of compost.

It would be well to inquire how you can expend a good share of the products of the land on the farm, and yet get market prices for them. That is, if after looking the matter over carefully, you can see how you can feed out, say for instance an hundred bushels of corn, or other grain, and get about as much for it in milk, pork, beef, mutton, or in the growth and increased value of stock, as the grain would bring if sold off directly for cash, then I should think it better to feed the grain, and give back the manure to the farm, than to sell it. Where the grain crops are to a considerable extent fed out with the hay and other forage, the manure is more active and valuable; and a few years' feeding in this way tells very decidedly in the increased products of the farm. There may be cases, to be sure, where it would be better to sell off the products pretty freely, and buy manure in return. If the land gets an equivalent for its efforts at producing crops, that will do; but it will not, in the long run, do to starve the soil and expect it to continue productive. Mr. Coke, the late Earl of Leicester, once said: "the more meat a poor-land farmer sent to Smithfield, the more corn he would be enabled to sell per acre at Mark Lane. Convert plenty of corn and cake into meat; for the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the dung is straw alone, the cattle are straw, the farm is straw, and the farmer is straw—and they are all straw together."

When the land was new, and filled with vegetable matter, it was naturally lighter and mellower than now, and produced well without much particularity in the tillage. But by long, and generally quite shallow cultivation, together with a system of cropping which has considerably taken out the vegetable substance of the soil, the land has become more compact and hard, and needs a deeper plowing and more thorough pul-

verization. Then, too, on some farms, with a naturally deep and strong soil, the surface of which has been hard run by shallow plowing and close cropping, and where an artificial hard pan has been created by the oft-repeated pressure of the feet of the cattle and the sole of the plow, in invariably shallow furrows, there is really a better farm underneath than that which is worked on top; and by breaking through the crust and bringing up a portion of the under soil, and mixing it with the exhausted surface, the productiveness of the land will be increased. You will find it advantageous to gradually deepen your plowing. If the land is quite light, then bring up an inch or so at each rotation of crops, until you have made an active soil of seven or eight inches. If the land is a close and naturally heavy strong soil, then you can deepen the plowing more rapidly, until you can take a furrow from eight to ten or twelve inches deep, according to the quality of the subsoil, and the liberality of the manuring. No baulks should be allowed in plowing, and the furrows should be cut and turned uniformly of the prescribed depth and width. This alone will add perceptibly to the products of the land, over what could be raised if the plowing were hasty and shallow, soil, manure and cultivation otherwise being equal. If we do our part well, mother earth will be sure to match us by doing hers.

As fast as one's means will permit, it is generally better to invest a portion at least of the earnings of the farm in the improvement of the land, rather than in buying more land, or putting them into stocks and other property, outside of farming. The stones, stumps, and other obstructions to cultivation may be advantageously removed from the land. They take up room, and hinder good tillage every way. Perhaps you have land that would be greatly improved by underdraining. If so, it would be well to investigate the methods of draining. Such improvements in effect add to the territorial extent of the farm, by increasing its productiveness, and they can generally be made at a much less outlay than by buying enough land to produce the additional crops that may be derived from the improved land.

3. If the various sources above mentioned do not furnish manure enough, you may perhaps find it profitable to purchase stable manure in town, and compost it with muck and other substances on the farm. But this depends on circumstances unknown to me, and of which you must be the judge. Perhaps you can buy unleached ashes at a reasonable price. If so, they may be mixed with muck in the proportion of about five bushels to a cord of dry muck, which will make a valuable compost for all dry lands. Poor dry land, which has been well manured, and planted a year or two, and is to be stocked down, may be sown with fifteen to twenty bushels of ashes to the acre, at the time of sowing the grain and grass seed, harrowing the ashes in with the seeds. The ashes will be likely to ensure a good catch of grass. It is a desirable object gained, when we can succeed in covering such land with a thick firm sward. The quality of the hay is better, the quantity greater, and when the land is to be again broken up for tillage, there is a rich sod to turn under to decay and help feed the succeeding crops.

4. It may perhaps be better to make butter than to sell the milk; for the skim milk and other wash of the dairy is worth a considerable per cent. of what the new milk would sell for, and will help materially towards summering the four or five March pigs heretofore mentioned. The farm must somehow be paid for what it furnishes you.

Several of your questions depend so much on local circumstances, that it is difficult to answer them specially without a knowledge of those circumstances.

5. Milch cows tax a pasture pretty severely. They are generally taken out of pasture at night, and then, too, the feed they consume not only goes to supply the waste of the animal system, but also to produce the milk; so that the manure is not so rich as that of dry stock, and the pasture, especially if overstocked, ultimately shows a marked deficiency of phosphates. If your pasture now keeps five cows *well*, I should hesitate about overstocking it with six. Perhaps you are situated favorably for plowing up portions of the pasture that lie pretty level, and manuring and tilling them occasionally and then laying them down to grass again,—meanwhile pasturing enough tillage land to compensate for the pasture land taken up. This is good farming where all things are right for it, and if your case is such, you may thus be enabled perhaps to keep six or eight cows as well as five now. The improvement of old pastures, within a reasonable expense, is in many sections of New England almost *the* leading question in farming. It is comparatively easy to devise methods for profitably improving our tillage lands; but not so for the more or less rough and hilly pastures. Stocking them lightly is one of the most obvious ways of improvement.

6. It is generally profitable to raise vegetables, if the market is large enough to consume them—that is, to take, at a fair price, the various assorted qualities, first and second rate, as fast as they are fit for sale. It will not do to go to town on uncertainties; whatever goes in the wagon must find a fair market, according to the quality of the article to be sold.

7. It is too early yet to speak confidently of the merits of the Chinese Sugar Cane for sweetening.

8. Cannot answer as to the profit of a dog.

9. If pigs are worth from three to four dollars each, when eight weeks old, it is profitable to raise them.

10. A cross of the Suffolk and Mackay breeds makes the best pig I have ever fed. Pigs that are half and half of these breeds mature early are deep in the carcase, and have bone enough to stand up on their legs till fattened fit for slaughtering. There is a constant tendency in our fine bred swine to run too small. You must have size, coupled with thrift and early maturity, to make March pigs weigh, on an average, 300 lbs. each, dressed, by the first of January following. Either of these breeds cross well with the best large breeds of the country.

11. The best cows of our old "native" stocks are excellent for the dairy. But the best dairy cows, on the whole, that I have known, are those half and three-quarters blood cows derived from our best mountain cows of the "native" stock, bred to a full blood Durham bull, of a good milking family, and the heifers of this cross bred in

again with the Durhams. These half and three-fourths blood cows have generally good size, excellent constitution, great milking capacity, and for practical purposes are generally superior to either the full blood Durham or original "native" stock.

12. I should certainly always look for the marks laid down by Guenon, when buying a dairy cow. I have never known a cow with all the "escutcheons," as he terms them, fully developed, that did not prove an A No. 1 milker. I have, however, known cows showing these marks only in part, that proved better than one would expect who went by Guenon's theory.

13. The Improved Hinge Harrow, made by Nourse, Mason & Co., is the best kind I have used. It is a square harrow, made heavy for rough land, or light for mellow land, and for covering grain and grass seeds. It is composed of two pieces of frame-work, connected to each other by iron hinges, and carries a breadth of five feet. The independent and easy play of the parts, on the hinges, enables the harrow to shape itself to the ground continually, so that whether going over knolls and ridges, or through hollows, it always hugs the ground, and every tooth has an operation on the soil. It has thirty teeth, which stand a foot apart every way, so that they are not liable to clog, and yet their number and arrangement is such as to work the ground very fine.

14. The Roller is very useful on any farm, large or small. It smooths the plowed land on seeding it down to grass, forcing the small stones into the soft ground, pulverizing the lumps of earth, securing a sure and quick germination of the grain and grass seeds, and preparing an even surface for mowing and raking. It is particularly useful on loose and porous sandy and gravelly lands, which incline to part too freely with moisture and manure, in a dry season. It makes them more compact at the surface, so that they are less exposed to injury by evaporation, and presses the loose earth around the seeds, giving the plants a good foothold in the soil, so that they the better resist the effects of dry weather.

Brattleboro', Dec. 30, 1857. F. HOLBROOK.

DIFFERENCE IN COWS.

Cows, under certain constitutional ciscumstances, are naturally disposed to convert their food into fat, so much so that there is great difficulty in keeping some classes in a breeding state, more especially improved Short Horns, Devons and Herefords. Turn a cow of this description into rich grass, and she is soon useless for anything but the shambles. The quality of the milk she gives may be fine, but the quantity almost nothing. We had a Devon, the property of a noble Duke, which carried off the first prize of her class at one of the Royal Agricultural Society's meetings, not giving more than one quart at a milking.

On the other hand, there is a class of cows naturally inclined to turn all their food into the pail. Turn a cow of this kind along with the one above, and she will rather get poorer every day, if the milk is taken from her, while her plump and sleek rival is gaining weight. The former will consume greatly more grass and water than the latter, returning for it in proportion a still greater quantity of milk, but inferior in quality. In town dairies, when fed on sour grains, distillers' wash, &c., the quantity sometimes yielded is almost incredible. When such is the case, however, life is generally short, especially if cows are in a low state at calving. Hence the reason why dairymen purchase near-calves of this class in good condition.

The above two classes may be called extremes, between which there is a mean, and this latter class of cows, if turned into a rich pasture along with the others, would keep themselves in good condition, and give a medium quantity of milk, the quality depending upon the richness of the food.—*Mark Lane Express.*

For the New England Farmer.

CHINESE SUGAR CANE---RESULTS.

FRIEND BROWN:—Although you have many friends who have communicated their experience in the culture of the *Sorgho sucre*, the last season, still I have thought a few facts, elicited in the natural way, from sources reliable, would be acceptable. Being disappointed in not receiving in season for *our pamphlet*, which is now fully printed, an account of the culture of this plant, on about one-eighth of an acre, by a friend, which I witnessed when on a visit to his place in August last—I extract the substance of what he says—because I know that what he says is true.

"The patch of cane (some 20 square rods) proved very uneven in its growth, some hills being not more than one foot in height, early in October; while others, in the immediate vicinity, were ten feet high—and the stocks from one to one and a half inches in diameter. I cannot understand this difference in the growth, as all the hills were treated in the same manner. I made no use of mine except to let my calves feed it, they being very fond of it—always selecting the largest and most mature stalks.

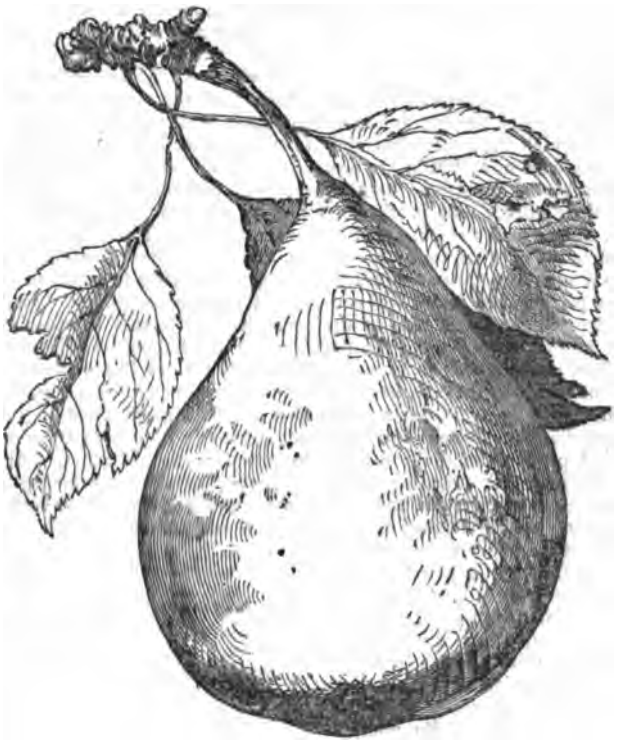
"Many of my neighbors grew small patches, from 9 to 12 feet in height, as even as Indian corn. Some fed it to their cattle green, others cured it for winter feed; and some expressed the juice, from which very fair syrup was made. But for lack of suitable mills for crushing the canes, and kettles for boiling, none here have made any large quantity of syrup. Some parcels were very good—others not so good, the syrup having a rank, harsh taste."

The foregoing account, given by one of the most intelligent cultivators in the State of New Hampshire, is a fair statement of the success attending the culture of the Chinese Sugar Cane in New England. Nobody here, that I can learn, has made *sugar* from it—nobody made any *molasses* that is equal to what we have been accustomed to use.

That this plant will grow—that it will afford a syrup in fair quantity, is proved beyond question—but that it is worth growing for the *sugar that can be made from it*, will require all the energy, perseverance and skill of a Hyde, a Lake or a Choate, for more than one season's experiments, to satisfy a doubting public. Do not understand me as denouncing this culture—all I say is, tha it has not yet been shown to be worth pursuing.

J. W. PROCTOR.

South Danvers, Dec., 1857.



THE LAWRENCE PEAR.

Since Downing wrote of this pear, in his edition of the "Fruits and Fruit Trees of America," of 1848, it has been fruited and tested by many persons, who generally agree that it is among our *best quality of pears.* It has not often been pictured, and we therefore, find a new pleasure in presenting it, together with the description at first referred to.

The Lawrence pear is a new variety, which will, undoubtedly, take its place among those of the first quality. It is a seedling, which sprung up in Flushing, L. I., in the neighborhood of two other pear trees only, the St. Germain and the White Doyenne, and bears some proofs, in its qualities, of being a natural cross between the two. Messrs. Wilcomb and King, nursery-men, of that place, first introduced this pear to notice; we learn from them that it produces regular and abundant crops, and the fruit is not inclined to rot or shrivel, commencing to ripen in October, and will keep till March. The tree is moderately vigorous, and has thorny, rather slender, light yellowish-brown shoots.

Fruit rather large, obovate, narrowing to an obtuse end, and a little irregular; pale, yellowish-green, marked with small patches of greenish-brown. Calyx set in a rather deep basin. Flesh yellowish-white, melting, juicy, with a very rich and sugary flavor.

For the New England Farmer.

CULTIVATE THE MIND AND THE SOIL.

In a previous article I attempted to gather from the published returns of the census of the United States and of Boston, some idea of the proportion which the learned classes bear to the whole population, for the purpose of ascertaining the inducements which the law of demand and supply offers to the great mass of our young men for an exchange of physical for intellectual employment.

The result of that investigation was the conclusion that about one in a hundred may be classed with the "learned professions." Yet, small as is this proportion, it is well known that these professions are uncomfortably crowded. For years the religious press has literally groaned with appeals for a half-paid, starving clergy; every village has nearly as many doctors as patients; and lawyers have so multiplied of late, that one of the Boston daily papers devoted its leading column, a few weeks since, to an enumeration of the

"miseries" of lawyers, and closed with an earnest appeal to young men to choose some other profession or business, if they would secure the means of an honest livelihood.

Fifty or one hundred years ago, most of the learning and cultivation of the country was confined to the professions. To be a minister, a lawyer or a doctor then, was to be a great man—to be raised above the other divisions of society, and entitled to much deference, respect and homage for the mere title which the profession conferred. This is not the case now. "Men are now respected," says a member of Congress, "as they are men, and not for their calling and profession. We add not an inch to any man's stature that he is a physician, a counsellor or a parson. It contributes but little to a man's social position that he is of any of these professions, and it will contribute less by-and-bye. The strong man *at* the bench and the weak one *on* it, are alike finding their own place. Now, learning, talent, great intellectual power, do not rush to these professions as formerly. Of the liberally educated a large proportion become merchants, mechanics and farmers. The unexampled progress made in our day in the useful arts, in material expedients, has opened new fields for talent and genius, and done much towards making all useful trades, callings and professions alike and equally respectable in the opinion of men, as they are in point of fact." If, then, the liberally educated are becoming farmers, if lawyers and doctors are giving up their practice and turning agriculturists, is it not a little singular that anybody should insist that it is one of the necessary "miseries of farming" to have "a mind vacant and idle," which "turns inward, preys upon itself, and wastes its energies and those of the body which holds it," simply because there is nothing in agriculture for the mind to do?

That farming has been regarded as an occupation which depended for success mainly upon physical power—mere brute force,—that farmers themselves have believed it was their business to work with their hands, and to leave head-work to the professions, is undoubtedly true. So long as our fathers had the forest before them; so long as it was easier and cheaper to clear an acre of fresh land than it was to devise the means for the improvement of an acre already exhausted, such a theory of farming may have been practicable, and so long the powers of the mind may have been dormant. But when the new land was all cleared up, and men were driven back to their worn-out fields, they were obliged to think as well as work. It became evident that something must be done; something different from what they had been accustomed to do. The barren, unfruitful fields would no longer produce spontaneously. Men were in doubt—the first stage on the highway to knowledge; they began to inquire; the mind was roused; a mental stimulus was furnished; the enthusiasm of "the absorption of the mind in a great truth" was experienced; experiments were tried; improvements were effected, and disappointments experienced.

That there has been a waking up of mind among farmers is evident, too, from the wonderful increase, within a few years, of agricultural books and papers and warehouses. Fifty years ago there was not I suppose, a single periodical devoted to agriculture published in the United States, scarcely a book on any branch of farming to be found in any bookstore, and nothing like the agricultural warehouses, which now exist in all large business towns.

At the present time there are more agricultural papers than States in the Union. Books almost without number offer to teach the "art and science" of the profession. Botany, Chemistry, Geology, Mineralogy, Meteorology, Natural History and other branches of the great knowledge family, tired of their old "silk stocking" exclusiveness, and of the livery they have served great men in, are now "scraping the acquaintance" of farmers, and, in the plainest dress they can put on, and in the most familiar manner they can assume, are offering to assist in their most arduous and disagreeable labors. And it would almost seem, as one passes through such a museum of farming implements as is the establishment of Nourse & Co., in Boston,—whether admiring an apple-paring machine, a dog-churn or a two-horse mower—that mechanical ingenuity had actually gone crazy in its efforts to save the hard work—to promote the comfort, and to alleviate the "miseries" of all concerned in farming. Mr. Cowper certainly never visited such an establishment, or he would not have said:

> "Ingenious fancy never better pleased,
> Than when at work t' accommodate the fair;"

when it is so evident that not only ingenious fancy, but high talent and deep learning are now-a-days never better pleased than when at work to accommodate the "toiling millions that till the earth."

But I see that I have run into poetry, although I commenced with the intention of being very prosy.

In my next article I will try to show that "mental stimulus" and time for the improvement of the mind, may be and are found upon the farm; and this I hope to do by arguments "as dull as a fact," and as unpoetical as the multiplication table.

A CITY MECHANIC.

Boston, Jan., 1858.

ANNUAL MEETING.

The annual meeting of the *Trustees of the Middlesex County Agricultural Society* took place at Concord, on the 7th inst. The day was pleasant, and a larger number were present than usual. *Wednesday, Sept. 29th*, 1858, is the day fixed upon for the next exhibition. Under the energetic administration of its affairs by Mr. President KEYES, the old Society seems to have renewed its youth; there was much enthusiasm among the Trustees, who made important changes in the premium list, and in several other particulars, that will have a tendency to give the operations of the Society a new interest and power.

PREVENTIVE OF POTATO ROT.—A subscriber informs us that one bushel of air-slacked lime to one hundred bushels of potatoes, well spread through the heap, will prevent the potatoes from rotting in the bin.—*Germantown Telegraph.*

For the New England Farmer.

LIFE IN THE WEST—SAND HILL CRANES—RATTLESNAKES.

EDS. N. E. FARMER:—I think it would be interesting to your eastern readers to hear someting in relation to the wild fowls, snakes, &c., of the western prairies. Among them is the Sand Hill Crane, (*Grus Canadensis.*) Many of these noble birds still nest in this vicinity, but their number is small compared with the numerous flocks that a few years since might be seen holding their strange dances on some favorite knoll, or feeding, while their sentinels, judiciously posted, stood ready to give warning of any intruder.

Some are credulous as to their dancing. It is true their movements are not so graceful as a Frenchman's, but dance they certainly do. As for their music, though lacking the harmony, it is about as loud and melodious as a fashionable opera air.

The Sand Hill Crane is omniverous, devouring pretty much anything eaten by birds. The nest is a simple pile of rushes or grass, flat on the top, built in some deep slough or pond. The eggs, two in number, are shaped much like those of the common turkey, of a light umber color, splashed with brown. The nest is usually surrounded by deep water, but the young birds swim readily, and leave it as soon as hatched. It is believed by many that they separate immediately upon leaving the nest, each of the old birds taking care of one; the supposition being that they would fight if allowed to remain together. In corroboration of this somewhat singular idea, I can only say, I never found two of the young birds in company. This bird is easily domesticated. I once knew one kept for several years, who showed all the attachment and intelligence of a dog. He never forgot a friend or forgave an injury. If any one had abused him, it was of no avail to attempt disguise; he recognized his enemy in any dress, and by an angry croak showed his displeasure, and warned them to keep out of his reach. He was a great gormandizer, and was very fond of field mice, many of which he destroyed, being quite expert at finding their nests, and searching out the inmates with his long bill. He would have been of service in the garden were it not for his inquisitive propensities, which led him to pull up for examination everything he saw them plant. Though a desire for knowledge might be very laudable, this mode of obtaining it met their disapprobation, and eventually caused his banishment.

Though a migratory bird, he did not seem to suffer from cold in winter, and being fond of wading, kept a place in a neighboring slough free from ice till late in the season, by tramping about in it. He was provided with a warm house, but he preferred to sleep with the cows, always sleeping beside one of them, lying flat on his breast, with his legs folded under him, and his head and long neck turned back between his wings. He was on good terms with all the cattle, and might frequently be seen playing with them, his part of the performance consisting in springing up, flapping his wings and whooping tremendously. This was precisely the same as the dancing of his wild brethren. He would also dance to the waving of a handkerchief; and on windy washing days sometimes dance for hours at a time, to the motion of the clothes on the line. When much enraged, he would stand with his head and bill pointed directly upwards, and utter a harsh, croaking sound, quite unlike his usual whoop.

A young crane makes no despicable article of food. The old ones, I should suppose, would be rather tough and snaky; but an old hunter of my acquaintance says "a turkey is not half as good eating."

AUDUBON supposed this to be only the young of the white crane, but he was wrong. The white crane is more of a southern bird, and is exceedingly rare here. I saw a flock flying over last fall for the second time. These two species are among the largest of our North American birds.

Geese abound in countless numbers, to the great disadvantage of farmers generally.

In regard to snakes, we have a great variety. The ones most prominent with us are the bull snake, blow snake and rattlesnake. The first named is the largest of our prairie snakes, being about five feet long, and the size of a small stake. He is not very venomous; when disturbed he utters a low sound resembling the bellowing of a bull; therefore he is called "bull snake."

The second, although not differing much in size or appearance, is more to be feared. His mode of defence is by blowing a poisonous breath, which, if inhaled, will cause sickness at the stomach. They are often found around buildings. They are great climbers, and sometimes will ascend a perpendicular wall twice their length. I once saw one *seated* in front of a dove's cote. He probably did not receive so warm a reception as would have been desirable, for when discovered he was gazing anxiously at some eggs, that the old dove stood guarding with true heroism.

The rattlesnake's distinguishing feature consists of a number of horny segments, placed at the end of the tail, and so united that upon their vibration the buzzing sound called "rattling" is produced. The number of segments composing the rattle is generally supposed to be an index to the age of the snake. But this is not always so.

The poison apparatus consists of two fangs for the injection of the virus, and the glands which secrete it from the blood. The fangs are situated upon the upper jaw bone. They are curved and retractile like a cat's claw, (being only erected when the snake strikes,) and are hollow for the passage of the virus. The secreting glands are situated one under each eye, and connected with the hollow fangs by two large ducts. When the snake strikes, the gland is compressed by strong muscles, the virus forced through the duct to the fang, and thence with great power into the wound. The fangs are not permanent, and when shed are replaced by new ones from behind.

The prairie massasanga, *(rattlesnake,)* so numerous in this State, is found eastward to New York, and throughout the western States as far as the Rocky Mountains. In the South it is replaced by another well known ground rattlesnake. Ours is the one which sometimes lives in the holes of the squirrel, though it is not the only species which forces itself upon the hospitality of that little animal. The prairie massasanga is not often found over two, though I have seen specimens full three feet in length. I have never heard of a single well authenticated instance

where the bite proved fatal to man. But the banded rattlesnake is much longer and more dangerous, while the terrible diamond rattlesnake of the South sometimes attains the length of eight feet, and a blow from which is almost certain death.

The rattlesnake was for a time our national emblem, and it is to be regretted that it was so soon thrown aside for the bald eagle. For despite the horror in which he is held, the reptile is by far the nobler animal of the two. He is no impotent and cowardly robber, like our emblematic bird, makes no unprovoked attacks, and always sounds his warning rattle, a sure precursor of the deadly blow that follows.

It is doubtful whether any of the popular remedies for serpent bite are of positive avail, except, perhaps, the internal use of stimulants. Probably the best way of treating a bite would be immediate excision, if practicable, as deep as the fang entered, or the application of cupping glasses, or sucking with the mouth. A pressure over the wound would also be beneficial, by retarding absorption. To be of any use, however, these measures must be taken instantly. It may be well to mention here that the only poisonous snakes in the United States are those composing the family of rattlesnakes, moccasins and copperheads. The moccasins are confined to the Southern States. The copperheads have a wider range, but are now, fortunately, nowhere abundant.

D. J. BENTON.

Manee, Ills., Dec. 23, 1857.

APPLE TREES BY THE SIDE OF FENCES

Many years ago it used to be the custom to set young apple trees alongside the wall or fence, not only against the fences bordering the highway, but quite often along the division lines of the fields. This practice has been latterly neglected, and we believe condemned by most persons who have planted trees. The question has often arisen in our mind whether that old custom was entirely without merit. Were there no good reasons for placing fruit trees in those positions? Giving the subject some thought, and looking at the farms where the trees were thus scattered, we confess, has given us several reasons for believing that the old way, after all, had its claims, as well as the modern innovation.

The work of cultivating the soil, for any crop, is just about doubled on land that is covered with fruit trees at the ordinary distances, say from 25 to 40 feet apart. The trees offer an obstruction to every operation, in removing the stones if there are any, in plowing, carting on manure, in harrowing, furrowing, and, perhaps, more than all, in cultivating the corn preparatory to hoeing. They are also formidable obstacles to the use of mowing machines when the land comes to be in grass, as well as obstructions in carting off the hay. They are so many hindrances, and consequently are as much a tax to the farmer as though the amount of hindrance was paid in cash.

These reasons are not presented to dissuade any one from planting an orchard in the compact form, but merely to show that objections may be urged to this mode of planting as well as to any other.

Some of these objections advanced against planting by the side of fences, are,

1. That the trees prevent plowing near the wall or fence.

2. That weeds and bushes grow and at length occupy the ground between the tree and the fence, until the former scatter their seeds over the contiguous fields, and the latter send out their roots to sap the soil of the nutriment which the trees themselves require.

3. That cattle reach after the limbs, either to browse them or feed upon the fruit, and thus break the trees and destroy their symmetry, and also destroy the fences.

4. If apple trees are set along side of mowing fields, we must either suffer the loss of the "fall feed," or run the risk of having the trees browsed.

5. That where trees are on the roadside the fruit becomes a temptation to boys, who sometimes steal it, knock the fences down, and stone and club the trees, greatly to their detriment.

Now let us see if these objections have any better foundation than those urged against compact orchard culture.

1. In order to make trees grow so rapidly as to prevent their being stunted, covered with moss and show premature old age, they must stand in a loose and porous soil, beside being manured; and this must be their position with occasional exceptions, for a year or two at a time, of leaving them in grass, for at least twenty years. A strip of land near the fence may be plowed and thoroughly pulverized, to set them in when planted, and this may be spaded up once or twice a year with as much economy, perhaps, as it could be plowed; for even in close orchard culture, the use of the spade is necessary after the best plowing has been performed, and spading the trees near fences may be done in spring and fall, at odd hours when other work is not pressing.—When this is faithfully done, it takes away the force of the second objection in regard to weeds and bushes.

3. The third objection, in relation to the destruction of trees and fences by cattle, is the most formidable one. But in order to prevent this mischief, the limbs of the tree may be started high, the fences made strong, and such other precautionary measures adopted as might be from time to time devised.

4. In regard to the fourth objection, if planting fruit trees by the side of mowing lots would keep cattle out of them, it would prove of essential service to many farmers who greatly injure their

mowing lands by feeding them too closely in the fall.

5. The fifth objection would have but little force in the country, where fruit is plenty.

Upon the whole, we are inclined to believe that the old practice of setting fruit by the side of fences, and especially where they border the highway, was an economical and proper one. They certainly must find a considerable portion of their support from the washings of the highways, and they afford shade in summer, break the rough winds of winter and render the way attractive and pleasant to the traveller.

For the New England Farmer.

DAIRY PREMIUMS.

At the recent meeting of the Trustees of the Middlesex Agricultural Society, two dairy premiums were offered for the next exhibition; and as the competitors are allowed to select any three consecutive months in the year for the trial, it is desirable that the information should be communicated to the dairy men of the county as soon as possible. The premiums offered are as follows:

For the *largest amount of Milk* from three cows, during any three successive months, $10. The weight and wine measure of the milk to be ascertained during the whole of the first week of each month. A full and accurate statement of the feed and manner of keeping the cows must be presented in writing, at the time of making application for the premium, and all the cows must be presented for the examination of the dairy committee.

For the *best product in Butter* from three cows, during any three consecutive months in the year, $10. The manner of setting the milk, time of keeping it, and the manner of churning and salting and putting down the butter, to be fully stated in writing, together with the kind and quantity of food the cows have had. Samples of the butter and all the cows must be presented for examination at the exhibition.

JOSEPH REYNOLDS, *Secretary.*

Concord, Jan. 7, 1858.

HAZELNUTS GROWING UPON A GRAPE-VINE.

The following, from the Hartford (Ct.) *Times*, will be found to be "nuts" enough for the incredulous even:

A Curiosity.—Mr. James Danforth, of South Windsor, has shown us a natural curiosity, in the shape of a grape vine which has clusters of hazelnuts growing on it. The vine was one of a large number growing among and over a lot of hazelnut bushes, and singular to say, some of the grape vines have produced bunches of hazelnuts, or rather a *union* of grapes and hazelnuts in one husk. The hybrid fruit is a curiosity. It grows in clusters, and presents externally the appearance of hazelnuts, and the taste, too, is that of a hazelnut. The germ, however, on cutting the fruit open, is plainly a little bunch of grape seeds, in each instance. The vines near by (and of which this is one) produce an abundance of the native frost grape; the hazelnut bushes, over which some of the vines grow, have the usual crop of hazelnuts. It would seem that the bushes so fed the vines which ran over them, as to produce the curious cross between the fruit of each. Mr. D. has left this specimen in our office; he says there are more of them where this came from.

For the New England Farmer

FARMING IN ORANGE COUNTY, N. Y.

MR. EDITOR:—You know that the ideas of "*pure Orange county milk*," and "*Goshen butter*," put the mouths of New Yorkers out of taste for the milk and butter of the rest of the world.

On Thursday, Dec. 3d, I left Irvington, New Jersey, and went on board an omnibus bound for Newark. The omnibus approximated to three times the length of those used most in Boston. Its course was over a beautiful plank road until it struck upon the pavements of the city of Newark, which city is in the midst of the fertile "red ground" of the county of Essex. By railroad to New York is a short but interesting ride. The extensive nurseries, along the way, could not fail to arrest the attention of one who loves "to look upon the cultivated field." The extensive marshes, too, where the seeds of fever-and-ague germinate, bear a strong relation to the world of life, as it now is.

I regretted exceedingly that I could not have had a day-passage upon the New York and Erie road, and the Hudson branch, to Blooming Grove, in Orange county, N. Y., where I am at the present time. But all the world will not come into the idea that every man is of so much consequence that all his wishes must be anticipated and provided for. So as one who counts only one, in the counting of millions, I have no cause of complaint.

Leaving Jersey City, the red soil is to be seen for some time; the railroad cutting slight elevations of land and then streaking away across extensive marshes. To the eye of an eastern man, the dull looking brick buildings and street-mud, corresponding in color, gives an impression of disorder, a want of neatness, &c.; but to people this way, a very different impression. To them these dull colors are only *mild*, in comparison with the bright red, white, brown or black, which are seen in the buildings and their fixtures, the men and their apparel, &c., in the Eastern States. I perceive, by conversation with men this way, that even in the decided colors which appear in the external arrangements of New England men and their homes, many this way see an evidence of "*ultraism* in everything." To some, it appears to be a repulsive feature, and one which for the time must be held at bay. There is a more extensive dislike, of this kind, to New Englanders, among the people of New Jersey, than among the New Yorkers. Neither appear to me to be conscious of the true cause of their dislike and suspicion of the "Yankees." The difference between the two, that is, the New Englanders generally, and the people of New Jersey or New York, is attributable mainly to the influence of natural circumstances and scenery upon the dispositions and characters of the masses.

Neither, in my estimation, is worthy of particular praise or dispraise for their different peculiarities.

I reached Blooming Grove in the evening.—The moon was just climbing up and looking over the tops of the mountains on the east. I had often, when passing up and down the Hudson, looking upon the majestic wall of rock which rose up on the west bank to mountain-height, wished to see what there was behind the wall. Now, I had got in behind the wall. The scenery was grand, by moonlight.

Stepping out of the cars at the Washingtonville station, I was agreeably surprised to find a gentleman in waiting for me. I soon found myself at the quiet, comfortable home of a gentleman whose plain exterior would have suggested to those fancy-judges who measure men's minds by the cloth or leather they wear, an opinion far from fact. I had fallen in with an extraordinary man—a thorough scholar and a man of extensive knowledge.

Morning light afforded a fine view of the country. In the distance, at the north, away up the Hudson, were seen the towering summits of the Catskill mountains. On the east, the mountains which skirt the Hudson. On the west, at a distance of some fifteen or twenty miles, another mountain-range. On the south, towards Sussex county, N. Y., bold and broken elevations saluted the eye. Thus encircled, lay a beautiful basin, with undulating surface cut by meandering streams, comprising the most celebrated dairy district in the whole country. If it is not a chosen home for the Israel of the Lord, it certainly has some of the characteristics of the grazing-ground of the ancient Israel, for it is near to Goshen, and the trade of the people is in cattle, so far at least, that milk and butter are their celebrated products. It is, moreover, like the land which God chose for His ancient people when they came up out of Egypt. It is a land of brooks and fountains of water. It flows with milk, and since my coming the flow of honey has both been sufficient and very satisfactory.

The hills and valleys are covered with evidences of the luxuriant growth of sweet grasses. The forests present a grand growth of oak and hickory interspersed with a few other trees. The soil is well supplied with clay and lime. The subsoil is stiff and wet. It is neither very rocky nor free from stones. Water is generally hard. Streams are sufficiently wanting in clearness, at this time of year, to indicate the nature and condition of the soil. The dairies are large, making fine profits both by the sale of milk and the manufacture of butter. The butter is mostly put up in firkins, tubs or pails, whichever you please to call them, containing eighty (80) pounds. It usually commands several cents per pound more than the common price of butter in New York. It is mostly, I think, in the hands of the producers, yet, for this year.

Murderer's Creek runs through the place. A few miles west, on the other side of Goshen, is the Wallkill river; and yet a few miles farther is the Shawangunk river, which two unite in Ulster county, and then swallowing Rondout Creek, push forward to Rondout, on the Hudson, where they hide their waters in that river, opposite to Rhinebeck.

The farmers here buy a great deal of grain to feed their cows. Yet the quality of their pasturage and of their hay, for such purposes, is as good as the world can produce. But they reckon a clear gain from the high-feeding of their cows, in three ways; namely, in the better condition of their stock, the better quantity and quality of their butter, and the increased quantity and quality of the manure which is made. Will the farmers of New England "stick a pin there?"

Wherever I turn my eyes, the country gives evidence of the industry, intelligence, sobriety and thrift of the people. Their farm-houses and their farms testify in their favor. Their homes are the homes of quiet and of moral and social happiness. C.

Blooming Grove, N. Y., Dec. 10, 1857.

A THOUGHT.

The rose that's wet with summer rain,
Or filled with early dew,
Sheds richer perfume o'er again,
And glows with lovelier hue;
The pearly drops that light within
Its leafy chalice rest,
But fresher beauties for it win,
Its fragrant charms attest.

So hearts bowed down with weight and care,
Or crushed with bitter grief,
Show clearly what their virtues are,
While waiting for relief;
Each tender pang is sweet that springs
From hearts by sorrow riven;
If on its parting breath it brings
Some dearer hope of Heaven.

A GOOD MOWER.

The farmers will brag as well as grumble. The weather is never just right, and their crops are all bound to be ruined; but after they are in, they do love to tell what famous ones they have had, and how much work they did in no time at all getting them under cover. "Out in Michigan last summer," writes a friend, "a number of farmers were sitting in front of a country store at the close of a sultry day, and telling stories about their work, and so on, when one of them took the rag off the whole of them by relating his experience:" "I say, you have all told whopping big yarns now; but I'll just tell you what I done once in York State, on the Genesee Flats, and on my father's farm. He owned a meadow just a mile long, and one morning in June I begun to mow—sun about an hour high—and mowed right along the whole length of the field. The grass was so heavy that I had to mow down to the lower end of the field and walk, or, as we say, 'carry my swarth.' Well, I worked on till sundown, and then quit. I just thought, as the meadow was exactly a mile long, I'd count the swarths, and I did, and there was *one hundred!* That gentlemen, is what York State folks call a big day's work." "So you walked two hundred miles that day, did you?" asked one farmer. "And mowed all the while you was walking?" said another. "So it seems," replied the great mower. "I tell you the facts, and you can make as much of it as you can."

EXTRACTS AND REPLIES.

SOWS WITH PIG.

Having two or three sows forward with pig, which are confined with a boar, I wish to inquire as to the safety and propriety of letting them remain together? I have been informed by several who make a business of raising pigs that it is best to let the sows remain together. No matter how many there may be, there is no danger of the mother of one brood interfering with the offspring of another; it is said to be the practice at the West, where large herds of swine are kept, to let both male and female remain together in such cases, and that losses seldom occur from pigs being killed by the opposite sex, or animals of the same sex. I know of two or three instances, where this practice has been successfully followed in this vicinity, but still I hardly dare run the risk. It is said to be a bad practice to remove sows from one sty to another just before they drop their pigs; thus you see I am in a sort of dilemma. Just give us your advice. H.

REMARKS.—If the swine have been together for several successive months, and their sleeping apartment is large, we should make no change if the animals were ours.

COLTS.

I have read with not a little pleasure, accounts of fine colts, and the best way to treat them. I have a pair of colts that were dropped one on the 10th of May, and the other on the 10th of June, which have not been kept any way extra, but are doing well on moderate feed. They stand 4 ft. 4 in. high, or over 13 hands, and are well trained to the halter, bit and harness. I drove them this day, one-fourth of a mile, each way from home, harnessed and hitched to a sleigh; they are perfectly kind and work nicely; are of a bay color, and are of the high blood of Rattler and Black Hawk. I rode after these colts when the oldest was but 7 mos. and 17 days old.

Wallingford, Jan., 1858. L. AMES.

SQUASHES AND PUMPKINS.

I have read with interest the philosophical speculations on "vegetable products" from your Lynnfield correspondent—but still, am disposed to agree to Marblehead suggestions, as to growing squashes in preference to all others; as I know of no place where the squash is grown in such profuse superabundance, both in quantity and quality, as along these shores by the aid of the fertilizers belonging there.

Will our friend answer the inquiry directly?

Can pumpkins be grown from squash seeds? or,

Can squashes be grown from pumpkin seeds?

I should like to know what can be said on this question—sticking closely thereto—without any collateral diversion.

Jan. 12, 1858.

ABOUT ARRANGING BARN ROOM.

I am about to build a barn in addition to two others that I now have. I want a cellar for my sheep in winter, and what I wish to know is, can I have stables in an L, so as to make it handy, as I do not want the stables in the cellar, nor in the barn over the cellar. Any plan or information you or any of your numerous correspondents may give will be thankfully received by

A SUBSCRIBER.

BOYS' DEPARTMENT.

LITTLE CARL'S CHRISTMAS EVE.

BY GRACE GREENWOOD.

"Come in!" shouted together the host and hostess of a little German wayside inn, near the banks of the Rhine, and not far below the city of Basle, and the borders of Switzerland. It was Christmas eve and a tempestuous night. The wind was raving round the little inn, and tearing away at windows and doors, as though mad to get at the brave little light within, and extinguish it without mercy. The snow was falling fast, drifting and driving, obstructing the highway, blinding the eyes of man and beast.

The "come in" of the host and hostess was in answer to a loud, hurried rap at the door, by which there immediately entered two travellers. One, by his military dress, seemed a soldier, and the other appeared to be his servant. This was the case. General Wallenstein was on his way from Carlsruhe, to his home at Basle. He had been delayed several hours by an accident to his post-carriage and by the storm, and now found himself obliged to stop for the night, at this lonely and comfortless little inn.

When the officer threw aside his plumed hat, and military cloak of rich fur, and strode up to the fire, with his epaulettes flashing in the light, and his sword knocking against his heels, cling clang—the gruff host was greatly impressed with his importance, and willingly went out to assist the postillion in the care of the horses. As for the old hostess, she bustled about with wonderful activity to prepare supper for the great man.

"Ho, Carl!" she cried—"thou young Rhine spirit, thou water-imp, run to the wood for another bundle of faggots! Away, haste thee, or I'll give thee back to thy elfin kinsfolk, who are ever howling for thee!"

At these strange, sharp words, a wild-looking little boy started up from a dusky corner of the room, where he had been lying with his head pillowed on a great tawny Swiss dog, and darted out of the door. He was coarsely dressed and barefooted; yet there was something uncommon about him—something grand, yet familiar in his look, which struck the traveller strangely.

"Is that your child?" he asked.

"No indeed," said the old dame—"I'm a poor woman, and have seen trouble in my time, but, blessed be the saints! I'm not the mother of water-imps."

"Why do you call the boy a water-imp?"

"I call him so, your excellency," said the woman, sinking her shrill voice into an awe-struck tone—"because he came from the water, and belongs to the water. He floated down the Rhine in the great flood, four years ago come spring—a mere baby, that could barely tell his name, perched on the roof of a little chalet, in the night, amid thunder, lightning and rain! Now, it is plain that no human child could have lived through that. My good man spied him in the morning early, and took him off in his boat. I took him in for pity—but I have always been afraid of him,

and every flood-time I think the Rhine is coming for his own again."

The traveller seemed deeply interested, and well he might be; for in the very flood of which the superstitious old dame spoke, his only child, an infant boy, had been lost, with his nurse, whose cottage, on the river-bank below Basle, had been swept away by night.

"Was the child quite alone on the roof of the chalet?" he asked in an agitated tone.

"Yes;" said the hostess—"all but an old dog, who seemed to belong to him."

"That dog must have dragged him up on to the roof, and saved him!" exclaimed the general—"is he yet alive?"

"Yes, just alive. He must be very old, for he is almost stone blind and deaf. My good man would have put him out of the way long ago, but for Carl; and as he shares his meals, and makes his bed with him, I suppose it is no loss to keep the brute."

"Show me the dog!" said the officer, with authority.

"Here he lies, your excellency," said the dame. "We call him *Elfen-hund*," (elf-dog.)

General Wallenstein bent over the dog, touched him gently, and shouted in his ear his old name of "Leon." The dog had not forgotten it—he knew that voice, the touch of that hand. With a plaintive, joyful cry, he sprang up to the breast of his old master—nestled about nimbly for his hands, and licked them unreproved; then sunk down, as though faint with joy, to his master's feet. The brave soldier was overcome with emotion—tears fell fast from his eyes—"Faithful creature," he exclaimed, "you have saved my child, and given him back to me"—and kneeling down, he laid his hand on the head of the poor old dog, and blessed him.

Just at this moment the door opened, and little Carl appeared, toiling up the steps, with his arms full of faggots—his cheerful face smiling a brave defiance to winter winds, and night, and snow.

"Come hither, Carl," said the soldier. The boy flung down his faggots, and drew near.

"Dost thou know who I am?"

"Ah, no—the good Christmas-king, perhaps," said the little lad, looking full of innocent wonderment.

"Alas, poor child; how should'st thou remember me!" exclaimed General Wallenstein, sadly—then clasping him in his arms, he said—"but I remember thee—thou art my boy—my dear, long-lost boy! Look in my face, embrace me; I am thy father!"

"No, surely," said the child, "that cannot be, for they tell me the Rhine is my father!"

The soldier smiled through his tears, and soon was able to convince his little son that he had a better father than the old river, who had carried him away from his tender parents. He told him of a loving mother, who yet sorrowed for him, and of a little blue-eyed sister, who would rejoice when he came! Carl listened, and wondered, and laughed, and, when he comprehended it all, slid down from his father's arms, and ran to embrace old Leon.

The next morning early, General Wallenstein, after having generously rewarded the inn-keeper and his wife for having given a home, though a poor one, to his little son, departed for Basle. In his arms he carried Carl, carefully wrapped in his warm fur cloak, and if sometimes the little bare feet of the child were thrust out from their covering, it was only to bury themselves in the shaggy coat of old Leon, who lay snugly curled in the bottom of the carriage.

I will not attempt to tell you of the deep joy of Carl's mother, and the wild delight of his little sister—for I think they were quite beyond any one's telling; but altogether, it was to the Wallensteins a Christmas-time to thank God for—and they did thank Him.—*Little Pilgrim.*

LADIES' DEPARTMENT.

DOMESTIC HINTS.

TWO RECEIPTS FOR MAKING VINEGAR.—Fill large glass bottles with weak tea, which may be what is left after drinking. Add a small quantity of sugar or molasses, and set them in a warm place, say in a window where the sun shines. In a fortnight it will be fit for use, and is as good as cider vinegar.

Take a pan of sour, thick milk; break it so that the whey will rise to the top. Fill a glass bottle with the whey, and to every quart add one-half cup of sugar. Set it in a warm place, and in a few days it will be fit for use.—*Dollar Newspaper.*

CREAM CHEESE.—The following receipt for making cream cheese has been found successful: Take a quart of cream, or if not desired *very* rich, add one pint of new milk; warm it in hot water until it is about the heat of milk from the cow. Add a tablespoonful of rennet, let it stand till thick, then break it slightly with a spoon, and place it in a frame eight inches square and four inches deep, in which previously put a fine canvas cloth; press it slightly with a weight, let it stand twelve hours, then put a finer cloth in the frame—a little powdered salt should be put over the cloth. It will be fit for use in a day or two.

FOR A COUGH.—An excellent remedy for a cough caused by a common cold, is as follows: Take ½ pint of sharp vinegar, place in it an egg without being broken, allow it to remain forty-eight hours, when it will be found that the shell has been completely dissolved by the acid; then break up the egg in the vinegar, add half a pint of honey, which being well mixed, will be ready for use. Take a spoonful for a dose several times a day. It is said that it never has failed to produce relief.

TO MAKE COFFEE.—There are various receipts for preparing and refining coffee. The following is the best that has ever come under our view, and is available in all places. Procure your coffee fresh roasted, and not too brown, in the proportion of a quarter of a pound for three persons. Let it be Mocha, and grind it just before using; put it into a basin, and break into it an egg, yolk, white, shell and all; mix it up with a spoon to the consistence of mortar; place it with warm—not boiling—water in the coffee-pot; let it boil up and *break* three times, then stand a few minutes, and it will be as clear as amber, and the egg will give it a rich taste.

NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, MARCH, 1858. NO. 3.

JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR MARCH.

"The seasons alter: hoary headed frosts
Fall in the fresh lap of the crimson rose;
* * * * the Spring, the Summer,
The chilling Autumn, angry Winter, change
Their wonted liveries; and the amazed world,
By their increase, now know not which is which."

MARCH.—Spring has now come, at least in name. Around the word *Spring* cluster a thousand pleasant associations. It is suggestive of soft airs and gentle breezes, and the singing of birds, and opening flowers and green leaves.—But in our northern clime we must wait patiently for its actual advent, for

"Winter often lingers in the lap of Spring,"

and chills all her ardors, and we not unusually have occasion to repeat, day after day, the invocation:

"Come, gentle Spring, ethereal mildness, come."

In more southern latitudes and more genial climes, March is a pleasant, sunny month. In our southern States the gardens are often planted in MARCH. The ground is prepared for corn and cotton, and much of the seed put in. But MARCH is by no means to be an idle month with us northern farmers. The wood is to be cut and split and piled up. The posts and rails to be got ready for use. The walls thrown by frost or cattle, to be repaired or new portions laid. If the frost is out of the ground, posts may be set, and all the fences put in order. Farm implements should be looked to, and every one of them put in complete repair. If a new point is wanting to a plow, do not wait till it is time to begin plowing, but procure one now, so that when team and men are ready there shall be no delay. Get all the chains mended, and overhaul the harnesses, and if you find any weak parts, either mend them yourself or take them to the harness-maker. It will be vexatious to have a buckle draw out or a strap break while you are plowing or hauling a heavy load of manure, and have to turn out the team and lose half a day in getting it mended. See, also, that the harnesses are well oiled, and that collars and hames and yokes all fit well, so that when you come to put them in motion, the work shall go on rapidly and pleasantly to both man and beast. The noble horse that exerts his strength in our service, is entitled to all the relief that can be derived from a well fitting harness. An easy, well-adjusted yoke for the oxen will contribute much to their comfort. We saw some yokes at the Agricultural Exhibition in Boston, last October, that might almost tempt the patient ox to desire "to pass under the yoke." With good harnesses and yokes and plows suited to the work to be done, and constructed upon scientific principles, it is surprising with how much more ease to the beast, and pleasure and satisfaction to the plowman, the work can be done.

All kinds of stock should be well cared for this month. The oxen should be so fed that they may be in good heart for the season of hard labor that is before them. The cows must by no means be neglected. If cows are reduced in flesh in the spring, it takes half the summer for them to recruit, and of course the profits from them is small.

Sheep require special attention this month. A pint of oats a day, or a few turnips cut fine, to each of your ewes, will be amply repaid by more vigorous lambs and the better health of the sheep. See that their pens and yards are kept dry, lest you find the foot-rot among them, before you suspect it. MARCH is considered a trying month for all kinds of stock. They have been so long without green food, that they begin to suffer for

it. If you have kept a portion of ata-bagas for this season, they will supply the wants of the animals better, probably, than any other kind of food.

MARCH is the time to fit up the hot-beds. Every farmer may have, at trifling cost, a few square feet covered with glass, to bring forward at least some early tomatoes, cabbages and cucumbers. Dig out a space as large as your glass will cover, about eighteen incnes deep. Add to the top of this ten or twelve inches of horse manure, and cover it with four inches of good soil, and sow the seeds, put on the frame and cover with the glass. Or a pile may be raised without digging, and the frame set upon it, banking up about the edges with the warm loam and manure. It must be six or eight inches larger each way than the frame. When the plants grow so as to reach the glass, the frame may be gradually raised out of their way, and in this manner strong and vigorous plants may be plentifully supplied. The nearer the plants are to the glass, the better they will grow. Raise the glass in the middle of pleasant days, and occasionally sprinkle with the watering-pot. The fermenting manure will keep the soil warm at the bottom, and the sun will warm the top, and thus the germinating seeds will find a warm soil and warm air, which will put them forward some two or three weeks earlier than they would come in the open air, and you will have fine, thrifty plants to set out about the time seeds are usually sown in garden beds.

When all this has been done, use some slight cover to protect them from the cold night air, and, if needful, from the black flies and other insects, and you will have nice tomatoes and cucumbers and cabbages, that you will enjoy very much. Now this may seem a small matter to many farmers, and not worth the trouble—but if tried will be found one of those little things that contribute to the pleasures of life—that keep us cheerful and contented and in a happy frame of mind. You will watch the growth of these plants, green and vigorous before anything around them shows itself above the ground, with great interest. They tell us of what is coming. They strengthen our faith in the certainty of the results of nature's arrangements, and encourage our hopes in the future. There is a satisfaction in getting our early mess of peas, or radishes or lettuce, that well repays all the trouble they cost.

On the twenty-second the sun will have completed half his annual journey towards the north, and have reached the equator, and the days and nights will then be equal. Thenceforward, until the sun shall have reached the northern tropic, or turning point, the days will be gaining upon the nights, and the soil will then receive more heat from the sun in the long days, than it will throw off by radiation in the short nights. Hence the heat will accumulate in the soil. This will go on till the twenty-fifth of July, or a little later, after which the days, having become considerably shorter, the nightly radiation about equals the heat received during the day.

Within the tropics there is but little comparative difference in the length of the days during the year, and the sun's rays fall perpendicularly upon some portion of the torrid zone the whole year. Hence the mean temperature of that portion of the earth, for the year, is much greater than that of those portions upon which the sun's rays fall more obliquely. But Nature, who is ever wonderfully fruitful in compensations, has provided an offset, by lengthening the days of summer, so that although the sun's rays fall more obliquely, they fall for a much longer part of the twenty-four hours. Hence, what is wanting in intensity is made up in time, and even more than made up, for the amount of heat received by the soil, above that given off by radiation, is greater during the three summer months, at fifty degrees from the equator, than it is at twenty-five. Hence, the wonderful rapidity with which the processes of vegetation are completed in nortnern climates.

It is well known that corn, in Canada, will spring up and accomplish its growth and ripen, in very much less time than it will in Florida. In the extreme north the early violet opens its delicate petals, and peeps out from under the receding snow, and the green springing grass marks the edge of the melting drift.

How wonderful, how involved and interwoven, and yet how simple, are all the works of nature! How great, how benevolent, how incomprehensible is HE who planned and executed all nature's works! Let us, then, learn to adore and trust, and commence the labors of another spring, encouraged by HIS promise that *"seed time and harvest shall never fail."*

SHROPSHIRE DOWN WETHERS.

This variety of sheep is spoken of as being black or grey faced and short wooled. In a *Mark Lane Express* report of a meeting in England, at which a pen of the Shropshire Downs were exhibited, they were noticed thus: "We especially admired Mr. Smith's prize wethers, for their splendid quality of meat, broad chines, and full plaits and wonderfully good loins and rumps." The breed is said to have descended from a hardy mountain variety, having an excellent constitution. Their favorable reputation is increasing rapidly in England. They come to maturity at an early age. The London *Farmer's Magazine*, from which we condense the above, says: "The Shropshire sheep have excellent form and symmetry, first class wool of thick pile, and great length of staple, well-formed, good dark brown heads, deep chests, famous legs of mutton, with a good dock set high on a straight, long spine.

EXTRACTS AND REPLIES.

MANURE—ASHES.

What is the best method of applying manure to the land, to spread or apply it to the hill?

Are not ashes good for dryish lands?

L. C. DARLING.

Westminster, Vt., Jan., 1858.

REMARKS.—As a general rule, it is the quickest, easiest, and most economical way to spread manure and plow or harrow it in. If some warm and stimulating substance could be applied to the hill where corn is planted, it gives it an early start, and is very useful. Ashes are excellent for this purpose, and so are the droppings of the hen-house, mixed with muck, loam or sand.

Ashes are useful on most lands, but especially on soils that are rather dry.

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ABOUT HOT-HOUSES FOR GRAPES.

I am about building a hot-house for the culture of grapes, principally, but being a novice at the business, need some reliable advice as to the structure, &c. I had contemplated building one 16 by 40 feet, and 8 feet high at side. What would be the best mode of building one of those dimensions? What sized glass, and if the glass should lap or be matched? If the north side is much exposed, should it be built of stone? Also what is the best mode of heating, and to what temperature should the enclosed surface be lowered? Also, any other advice that is necesssary. If you have any work on the culture of grapes, please state the price and name, and I will send for one. B. S. A——EE.

Providence, 1858.

REMARKS.—Perhaps Mr. Bull, of Concord, will give our correspondent some hints in the matter. Chorlton's "Grape Grower's Guide," price 60 cts., and Allen's "Treatise on the Grape," price $1,25, are excellent works. Leuchars on the "Construction and Management of Hot-houses" is more elaborate, but is invaluable to one who desires to construct a hot-house of any size.

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LIME AND MUCK COMPOST.

1. What length of time should a compost of lime and peat mud or salt mud be mixed to make it suitable to apply to the soil for a crop?

2. What proportion of lime should be used with the mud?

3. Which is best, the shell lime or common lime?

4. Should it be water slaked or air slaked?

5. Should it be thoroughly pulverized and mixed, or can a laying of mud, five, six or eight inches thick be put down, and then a sprinkling of lime be used? A. D. M.

Hyannis, Jan., 1858.

REMARKS.—1. A compost bed of muck and lime may be safely used in one week after it has been thoroughly mingled; but it would be riper and better if suffered to lay a longer time.

2. On clayey lands five or six bushels of lime to a cord of muck would not be too much, but on common loams one or two bushels will answer very well.

3. It is said that shell lime, when well burned, is stronger than stone lime.

4. The lime should be water slaked, because in this condition it is quite soluble, but is very slowly so after it has been exposed to the atmosphere and become like chalk.

5. Prepare the compost heap in layers, and after it has remained so for several days, or weeks, according to the time when it is wanted for use, overhaul the whole by cutting down perpendicularly through it, and pulverize and mix it thoroughly. It is then ready to be applied to the soil.

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BOARDS OF AGRICULTURE.

I perceive by the journals that come to hand, that organizations of this character are now in full tide of successful experiment in Maine, New Hampshire, Massachusetts, New York, &c. I know of no modern improvement better fitted for the instruction of the people, than the proper organizations and management of farmers' clubs. I am pleased to see our own Gov. Banks taking hold of the plow at the first Legislative meeting of farmers, and promising his co-operating aid. What better thing can he do? Are not three-fourths of all his constituents directly dependent on the culture of the soil for their living and their happiness? As the head of the farmers' club, the Governor has one of the best fields for honorable and useful labor. ESSEX.

January 28, 1858.

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A LUSUS NATURÆ.

MR. BROWN:—Mr. Albert Claflin, of this town, had a cow whose time expired to calve on the 8th of April last; the calf did not make its appearance. He milked her a short time and turned her out to grass. In December, (eight months after,) he butchered her and found the calf in a perfect state of preservation, enclosed in a hard, dark substance. It is something new to me, having never heard or seen anything of the kind before. S. D. DAVENPORT.

Hopkinton, Jan. 11, 1858.

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A FINE HEIFER CALF.

DANIEL KNOWLES, of Newton, raised last season a heifer calf which at six months and ten days old weighed 510 lbs.; of native breed. M.

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To "E. H.," *Rutland, Mass.*—It is impossible for us to give you any suggestion of value in relation to your cow, from the symptoms you describe. The difficulty is probably local and temporary, and will yield to the ordinary remedies of mild cathartics or injections.

☞ The Children's Mission Society of this city will send out another delegation of children to the West about the first of April next. An agent of the Society will attend them, and procure suitable homes.

For the New England Farmer.

SUCCESS—FARMERS' CLUBS.

MR, EDITOR:—In order to succeed in any thing, one must love it, and give it all the energy of his nature. If he does this, and is blessed with ordinary health, he will be successful—he cannot help it; this is according to the law of cause and effect.

Now permit me to say a few words to those farmers who are continually complaining of the want of success. Before giving utterance to these complaints, would it not be well for such to take an account of stock, investigate the operations of the farm in all its departments, in doors and out, and see if there has not been a lack of knowledge, common sense, enterprise, skill; some one or all these, which might have been easily acquired or obtained from some good agricultural paper, or, perhaps, by a simple inquiry of neighbor Thrifty.

Those operations which go by the name of *luck*, do not come half so often by "chance," as most people imagine. Whenever you find a person remarkably successful in any undertaking, whether it be as the mechanic, merchant, or farmer, you will find upon close investigation, that luck, as generally understood, has had very little to do with his success, though I would by no means deny that in some instances, favorable circumstances have helped produce the grand result. Much more frequently, however, it will be found, that such a person has a thorough knowledge of his business; he knows how to do what he wants done, and when; and it is done at the proper time, and in the right way. You will find him thoroughly posted up in his business, and that he avails himself of all those opportunities which present themselves to accomplish what he wishes, just in time to succeed! No matter what these may be, provided they are honest, he brings them to bear upon the grand issue. If there is a new implement, which will do his work better, faster and cheaper, than any he has, he gets it. He employs good help, improves his stock, renovates his pastures, increases his manure heap from the resources of his own farm, plants the best seeds, &c. &c., and success comes as surely as water will run down hill. Is there any *luck* in all this? Why, my dear man, open your eyes, and read the papers, and you will soon be convinced to the contrary. What such a successful farmer *has* done, another *may* do; one success brings another, and plenty of means with it. *Cash*, if you please, is the result of such a course. All the elements of this success are within the reach of nearly every farmer in New England. There can be no mistake in this, but it never will be obtained by those who rest satisfied by doing as the "fathers have done," or who are not wakeful to the spirit of the day, and goes boldly to the work.

Thus far, I have written altogether differently from what my intention was when I took my pen, which was—to say a few words in regard to *Farmers' Clubs*. I have noticed this subject mentioned in quite a number of the newspapers of late, aside from those devoted to agriculture, proving the importance attached to their meetings by those who are supposed to be acquainted with what the times demand, and the best interest of the farming community. Where these meetings have been in operation a single year, I will venture to affirm, you will find more intelligent farmers, better cultivated farms, and more successful operations connected therewith, all things being square, than will be found where none of these social gatherings, (for they should be truly such,) have been instituted. In this, there is not a shadow of a doubt. The sum of human knowledge is diversified, and no one man can know every thing, however small; but when all these "*littles*" are put together, the sum total is astonishing. Just so in farming: when all the "mites" are put together, the aggregate is large, and it should be the object of the farmer to gather up these, that nothing be lost. If I were a farmer, and there was nothing of the kind in operation in my neighborhood, I would not rest a single day, without some effort to establish a Farmers' Club, feeling assured, that I should be more amply paid than dollars and cents could do. The advantages to be derived from these meetings will suggest themselves to every thinking man; they are numerous, and directly to the interest of those who engage in them. I am informed by a gentleman who knows whereof he speaks, that good, great good, and nothing but good, has been the result in every place where these Clubs have been formed and sustained for a single winter. Meetings for professional improvement are held by ministers, doctors, &c.; why not by the professional agriculturist, the foundation and prosperity of all human enterprise. The old-fashioned system of "sleep in the corner" must be abandoned, and that of "young America" introduced. Now, farmers, is the time; the long evenings are upon us, do not let another week go by, without an effort for the formation of such a Club in your neighborhood. A text,—No matter how dull the instrument, grinding, on a good stone, if persevered in, will bring it to an edge. KING OAK HILL.

December, 1857.

BEST THING FOR BURNS.

It may be put down as a settled fact that the very best application for all kinds of burns and scalds is an immediate application of dry *wheat flour*. It is without controversy better than any and all of the "healing salves," turpentines, oils, "pain-killers," &c., that can be named. We speak positively on this point, because it is one decided by the best physicians, and we have had abundant practical proofs of its efficacy.

Heat disorganizes the flesh, deadens the cuticle or outer skin and admits air which is irritating. A good coating of flour shuts out the air, soothes the irritation, and dries up the fluids thrown out. Do not imagine that "something healing" must be applied. Not all the salves in the world can mend broken flesh. You can stick together broken glass, or wood, with wax or glue. You can weld together severed iron, but no such treatment is applicable to flesh disorganized, cut or burned away. Nature, so to speak, has a way of her own, and only one way to repair a breach in the flesh. *The healing material comes from within.* If the hand be cut, bring the severed parts together, hold them there steadily, cover up the part from the air and from external injury and the healing will go on so long as there is no

disturbance. If from curiosity, or anxiety, or other cause you disturb the half-formed new flesh, a sore will be the consequence.

We repeat, for all kinds of burns or scalds, however severe, put on *only* a thick coat of flour. If a hard crusty mass be formed so as to produce irritation, after a day or two wash off the surface carefully with blood-warm water, dry partially, and put on more flour, but never disturb the actual surface of the sore until, when entirely healed, the scab falls off of its own accord. Our word for it, this treatment will best promote the cure of burns. But a short time since a child upset a dish of boiling water into its bosom, producing a fearful scald upon the whole front of its body. The mother chanced to be a reader of the *Agriculturist*, and noted our remarks on this topic some two years ago. She immediately applied flour, and flour only, binding it on with a cloth loosely so as not to produce irritation.—The child was soon soothed, and in a very few weeks was entirely healed, with scarcely a scar remaining. This is but one of many similar instances that have come to our knowledge from time to time.—*Amer. Agriculturist.*

LETTER FROM MR. BROWN.

Washington, Jan. 15, 1858.

MY DEAR SIR:—I left Boston at 3 o'clock on Monday in the midst of a drenching rain, and arrived in New York at midnight. During much of the way the rain fell in torrents, so that the track in some places was covered with water. There was no snow beyond New York. After leaving Philadelphia, I observed men engaged in farm work, such as removing stones, ditching, &c. The weather is more like that of a day during the Indian Summer, or one of those soft, balmy days that sometimes come like a good angel in the last of March. In *twenty-eight* hours from the time of leaving Boston I reached Washington, and during that time enjoyed five hours of quiet sleep at New York. There certainly was a contrast between this and my first visit to the federal city, when about *eight days* were occupied, and they were days of hard work and fatigue. This difference is merely the result of *science*, that man-helper, which some persons affect so heartily to condemn. That science, or head-work, I confess, has been abundantly aided by hand-work, but the latter only follows the former.

Yesterday I attended the first session of the *annual meeting of the U. S. Agricultural Society.* It took place at the Smithsonian Institution, and was attended by gentlemen representing twenty-one States and two territories. President WILDER pronounced his annual address to the Society, congratulating it on its continued progress and success, and peremptorily declined a re-election. It touched on the important transactions of the Society during the last year, and made a feeling allusion to the removal by death of two prominent and valued officers, Vice President THOMAS J. RUSK, of Texas, and G. W. PARKE CUSTIS, of Virginia. He concluded with a brief review of the valuable influences on national and social advancement excited by the Association, and an enthusiastic exhortation to its members to "carry forward its objects, till from East to West, from North to South, our country, our *whole* country, shall rejoice in the triumph of perfected husbandry, in the blessings of universal peace and prosperity;"

"Till plenty, rising from the encouraged plow,
Shall fill, enrich, adorn our happy land."

After the adoption of several resolutions in furtherance of business, Judge FRENCH, Vice President of the Society from N. H., was invited to address the meeting upon agricultural affairs in England, as he had observed them during his late visit to that country. He promptly honored the call, and spoke eloquently, for nearly an hour, upon the subject of *steam plows;* he stated that he saw abroad three different steam plows in operation, and was of the opinion that in *large* tracts of land they will become available, by doing a great amount of work in a short time, and thus, in effect, lengthening the season and giving crops a better opportunity to mature. His remarks elicited many inquiries, and seemed to wake a lively interest in the subject. In the plowing he witnessed, the work was well done at the rate of an acre an hour. Mr. JOHNSON, Secretary of the New York State Agricultural Society, Mr. BYINGTON, M. C. from Iowa, and others, engaged in the discussion.

Dr. ANTISEL, of this city, then read a paper upon *"the necessity of having a more perfect knowledge of the mineral necessities of our crops developed."* He brought to the notice of the society some observations regarding the proper application of chemistry to agriculture, remarking that the last fifteen or eighteen years had opened to us varying views of the value of chemical science. I cannot now even give you the leading topics of his learned paper, but was glad to find a scientific man condemning the theory that a common five dollar analysis of the soil is of importance to the farmer. That delusion has had its day, I hope never to be revived. I have been informed by one of the ablest chemists of the country, that a thorough analysis of any soil could not be made at a less cost than twenty dollars to the chemist himself! What, then, should be the judgment pronounced upon those who have advocated these analyses at one-fourth the cost of a genuine investigation, and thus impose upon a confiding and credulous people?

After the reading of this paper, Dr. LORING, of Salem, Mass., addressed the meeting in feeling and eloquent terms in reference to the loss of its

two members, Messrs. Rusk and Custis, and offered two resolutions, which were adopted, and then the society adjourned until to-morrow at nine o'clock.

SECOND DAY'S SESSION.

The business to-day has been the election of officers, and a long discussion upon the subject of the *Chinese Sugar Cane*. Mr. TENCH TILGHMAN, of Baltimore, was elected President; B. B. FRENCH, of Washington, Treasurer; and BEN: PERLEY POOR, of Massachusetts, Secretary. The Vice Presidents of the Society remain generally as they were last year. The discussion on the sugar cane and its products was harmonious and interesting. Dr. LORING, of your State, took an active part in it, and although I did not entirely agree with his views, am happy to say that he distinguished himself as a ready tactician and a fluent and agreeable debater, and left an impression of what he may do at some future time, perhaps, in another sphere in the federal city. Another session of the society is to be holden to-morrow.

The weather is soft and delicious; the fashion and beauty of our broad country seems to have concentrated here, in spite of all disasters, either financial or commercial. The Court side of the Avenue is thronged, and, what is wonderful, age is elastic and fresh again; the lame halt no more, the blind see, the disconsolate rejoice and are glad, while each one seems to outvie the other in an effort to show that *time* and *care* and *sorrow* have never touched *them*, and that they mean always to bloom in perennial freshness and youth! Some general topics I must touch in another letter. Truly yours, SIMON BROWN.

Joel Nourse, Esq.

MEADOW LAND—MANURE.

The best dressing for meadow land is ashes and bone-dust; and if it is dry and gravelly, a top dressing of marl muck is first rate. The muck should be dry, and placed in heaps in the fall, and left to be decomposed for the frosts of winter. Leached ashes, marl and mud are all first rate for gravelly land. When farmers know that 110 lbs. of leached ashes furnish as much phosphate as 507 lbs. of the richest manure, they will stop selling their ashes, and apply them to their land. If old bones can be procured, a mixture of four bushels of ashes to one of bone dust is better than either separate. Land producing one ton per acre, has, by this application, been made to produce three tons. Mud and ashes are also a good mixture, in the proportion of six or eight bushels to the cord of mud. If leached ashes are used, the proportion should be about one of ashes to three of mud. For this mixture the mud should be dry, and placed in heaps in the fall.

For clover meadow, plaster or gypsum is perhaps the best top-dressing. The ashes of an acre of red clover contains no less than three bushels of gypsum. This shows that its presence in the earth is necessary to the growth of clover. A bushel or two to the acre will often double the crop, and add more than twenty times its own weight to it. Four pounds of gypsum will produce one pound of nitrogen, and every pound of nitrogen increases the crop a hundred pounds; provided, always, the land is suited for clover and plaster.

The value of manure depends on the amount of nitrogen it contains; and plaster fixes it and detains this gas, which would otherwise escape into the atmosphere, and give it out for the use of the plants, when wanted. The plaster is not the manure, but a receptable to hold the manure arising from the decomposition of animal and vegetable matter.—*Ohio Farmer.*

For the New England Farmer.

YOUNG MEN AND THE FARM.

MR. EDITOR:—While looking over your number of Nov. 21st, my attention was arrested by a rejoinder to an article on the aforesaid subject, which was written by me, and published in your paper, issued Oct. 30, vol. 12, No. 44. This "Farmer's Son," who wishes to "propound a few questions to the author of the above article referred to," could not have cast his lines in more acceptable places, as it is quite agreeable to me to answer his propositions.

I am first asked, "would you advise one to remain on the old 'old farm,' and with the 'old man' to cultivate the productive vineyard of God, which he gave to us for an inheritance?" If you *can* remain with your father, without any inconvenience to either party, *do so*. If I ask you what the chief aim of man is by *nature*, and the chief *end*, also, you will at once say happiness. Then, where can you better find this appropriate stimulus, than with your father and mother, and that "bonnie lassie," as it seems to be a matter of fact in your case? Where will you take more comfort than in your old home, with her whom you love? It is not to be expected that a large family of children, both boys and girls, are to "get married" and "settle down" on "father's farm." I did not mean to convey any such idea. I admit, that women are obliged to toil "year in and year out." This ought not to be so. It is the duty of every man to alleviate the labors of the opposite sex. "There is a fine colt in the stable, I must take care of it or I shall not get my $200." "I have a pair of steers in the barn, also, and I must take extra care of them, or I shall surely lose the first premium;" and thus with all that he has of *property*. But, is there occasionally one word said about the wife, mother, daughter, or of the household affairs? *Men* are to blame about these things. Do they, as often as they should, "fill the wood box," bring the water, and relieve them of thousands of "lifts," when they can as well as not? Perhaps this coming cold weather you will sit "behind the stove," your wife will say, "John, please help to lift this large kettle into the sink." "O, dear, I must go and card the 'colt!'" Why, how hard your wife tries to get that kettle up; finally she has a pain in the side, but you exclaim, "she'll get over it to-morrow." Is it any wonder that your young and

pretty wife languishes, and finally dies, from too much care and labor?

You wish to know if I would advise one to remain upon a farm where household duties tax the female strength beyond its powers of endurance? *No!* unless you are able yourself to alleviate them of their taxation, and make your home to "bud and blossom as the rose," as it will be your duty to do, wherever you do locate. If it is impossible to remain upon the old farm, and with the "old man," *remain on some farm.* Perhaps you have more "*moments*," and better "*means*" for study on the farm than you would have in many sedentary occupations. You have a lifetime before you, and if you are on the farm you have *hours* and *days* that you might occupy, which, perhaps, are devoted to pleasure or idleness.

Young men generally wish to be something that they cannot. They want to get a "*finished* education," in a very short period; they want to get married before the "colt" is old enough to drive, they want to get rich, and be elected to Congress, before they leave the common district school. In fact, in the present age, they are born, live, and die, in a hurry. They cannot wait for nature's developments.

You have difficulties, no doubt, and so have I, and so has each one of us. Perhaps you and I have much more serious obstacles to overcome than do many others.

In conclusion, I must say, that the *farm* is the place, in general, for youth; and for the "*old man*," if possible. F. V. POWERS.

Waterford, Vt.

For the New England Farmer.

VEGETATION IN CALIFORNIA.

I see many accounts of the enormous size of vegetables grown in California, which would seem almost incredible were they not authenticated by many witnesses beyond all doubt. A few specimens may be given for comparison with the same species raised in this region.

At a meeting of the Farmer's Club at the rooms of the American Institute, New York, several years since, two gentlemen who had recently returned, made some statements in regard to the size of vegetables grown there; for instance, an onion weighing twenty-one pounds; a turnip one hundred pounds; a beet sixty-three; carrot, forty; a cabbage, seven feet in circumference, weight fifty-six pounds; and bunches of grapes weighing from seven to ten pounds each. These, it is true, are extraordinary specimens, but the average size of vegetables far exceeds any thing of the kind with which we are acquainted in this section. Every one is familiar with the description of the groves of gigantic trees found there, in comparison with which our largest ones are mere walking sticks; one called the "father pine," which is dead and fallen, measures four hundred feet in length, and one hundred and ten in circumference; two hundred and fifty feet from the roots it is twelve feet in diameter!

There appears to be something peculiar to the soil or climate of California which favors this enormous growth of vegetation. An analysis of the soil would, perhaps, reveal the secret; some powerful fertilizer might be discovered beneath the surface which produces these astonishing results. We have as rich soil in the Mississippi Valley as can be found in the known world; the climate is also genial, and in some parts of it, very warm, yet we have here none of these monstrous vegetables products which will compare with the above-mentioned. We have gardens in the vicinity of our Atlantic cities where all kinds of fertilizers are employed, and the soil rendered as rich as possible, yet vegetables never attain these enormous proportions. It appears desirable to ascertain the cause of the extraordinary growth of plants on the Pacific slope, and it is hoped some one competent to investigate the subject will enlighten the public in regard to it.

Leominster, Mass., 1858. O. V. HILL.

For the New England Farmer.

ORANGE COUNTY, N. Y., AND ITS PRODUCTS.

MR. EDITOR:—Yet among the Yorkers, (Dec. 23d,) I will again pick up the pen to put a few thoughts on paper, for your use or disposal. In the midst of so many circumstances, both new and novel, time has hurried along at an alarming rate; and I look with surprise at certain symptoms of the very near dying-day of our valuable friend, the year 1857. With farmers and their families, the seasons are more closely observed, in their changes, than with other portions of our common family. With them, festive seasons come naturally, and each opening season is a new play opened; sometimes somewhat tragic; never greatly comic; always, rightly received, interesting and instructive.

About a mile to the southwest of where I am now writing, stands a large, white farm-house, occupied by a Mr. Strong; where the grandfather of the present occupant, "Capt. Strong," was murdered by a band of Tories in time of the Revolution. Capt. Strong was an active advocate of the colonial cause; and for this was murdered in his own house. The one who, among the band of Tories, was the positive slayer of Capt. Strong, was a man by the name of Smith. From all I can learn I suppose he was one of a noted band of infidels and outlaws, who had their head-quarters near the Hudson, and rejoiced in acts of blasphemy, licentiousness and crime. He, with others of the same sort, came to a short corner in their career, by being legally elected to "stretch hemp" from a scaffold; which office they were obliged to fill. This was their reformation, if they ever experienced any. We rejoice not at the doom of the dead; but it is lawful to rejoice for the safety and peace which is secured to the living.

The farmers in this region are mostly what we Yankees would be inclined to call *large farmers.* It seems to be no great wonder for a man to have six or seven hundred acres of land. There are some small farms. The population is by no means dense, although it is more so along the line of railroads.

The people are mostly church-goers, and even their horses want to "go to meeting." A circumstance was told me a day or two since, of an aged man by the name of Decker,—who had long been a constant attendant at the Presbyterian church of Blooming Grove,—and his horse. Mr. Decker became old, and being too unwell to attend church

for several Sabbaths—the distance being three or four miles—his carriage horse became dissatisfied, and on Sunday morning, when people were going in various directions to their various meetings, he jumped out of the pasture and sped away to church, took his place beside the post where he had usually been tied, and waited until the close of service; when he turned his attention homeward, going directly like a serious-minded horse, well aware of the importance of observing the Sabbath. It wouldn't be a bad idea to have that old horse commissioned to preach to some people.

In one of the towns of this county, some years ago, "as history relates," the dogs of a certain community became so great church-goers that the minister found proper occasion to suggest to his parishioners that if the people would learn from the example of their dogs he should have many more attendants upon his ministry. Men of wisdom may learn lessons from poor puppies.

I have taken some pains, since writing my last, to ascertain, as definitely as possible, about the products of milk and butter. At a station on the branch railroad, running from Chester to Newburg, and connecting at the former place with the Erie railroad, I learned that about 2000 gallons of milk were sent daily to New York. This was said to come from the farms included in about six square miles of territory, that is, along the road perhaps three miles, and extending back from the road about a mile on each side. This would give to the farmers, at three cents per quart, the sum of sixty dollars per diem, for milk alone. This winter product bears no comparison to the amount produced in summer. The summer crop sells at a lower figure than that of winter, but not a less profitable. It is easy estimating the income from milk, to a town of six miles square, supposing $60 a day to describe that of six square miles. The daily income of the town would be $360, for milk alone. Its yearly income for the same would be no less than $130,400.

The milk-sales do not take away the floods of milk, by any manner of means. Butter-making is generally considered more profitable, and those who sell milk also make immense qualities of butter. The fair product of a good butter making cow is about two firkins, say 168 pounds.—Some extra dairies make three firkins, or about 250 pounds. But this last is too high to found any estimate upon. At 168 pounds, as they have sold their butter for several years past at 25 cents per pound, a cow gives $42 worth of butter.—What is said to be an average product of butter, per cow, is about 150 pounds per year. The additional credit to the cow is for the buttermilk, for feeding hogs, the calf and the manure for the land. Some high farmers estimate the proceeds of their cows at $65 per year, each. Upon some of the large farms, from fifty to near one hundred cows are kept.

In making butter, they churn daily, sometimes twice a day, some by horse-power, some by dog-power, some by sheep-power and a few by water-power. It is done with a dash churn; the size of churn said to secure most butter from cream being of about 24 gallons. Larger churns are not thought to gather the butter so well.

When the butter is gathered, it is taken from the churn and worked over, to get out the buttermilk. Then it is washed. Some pure cold water is applied to it, perhaps a quart to five pounds, and immediately worked through it, to remove what remains of buttermilk. It is then salted, packed down solid in the firkin, which, when full, is covered with a prepared brine, to exclude the air and keep it sweet.

The butter made in October is here generally preferred. Some prefer that made in May.

I would say something further about the habits of farming here, but I am admonished by the length of this letter, that I shall surely fail of that virtue of good sermonizers and scrap-writers, *brevity*. So I will not attempt to tell how dogs, sheep and horses handle a dash-churn. C.

Orange Co., N. Y., Dec. 23, 1857.

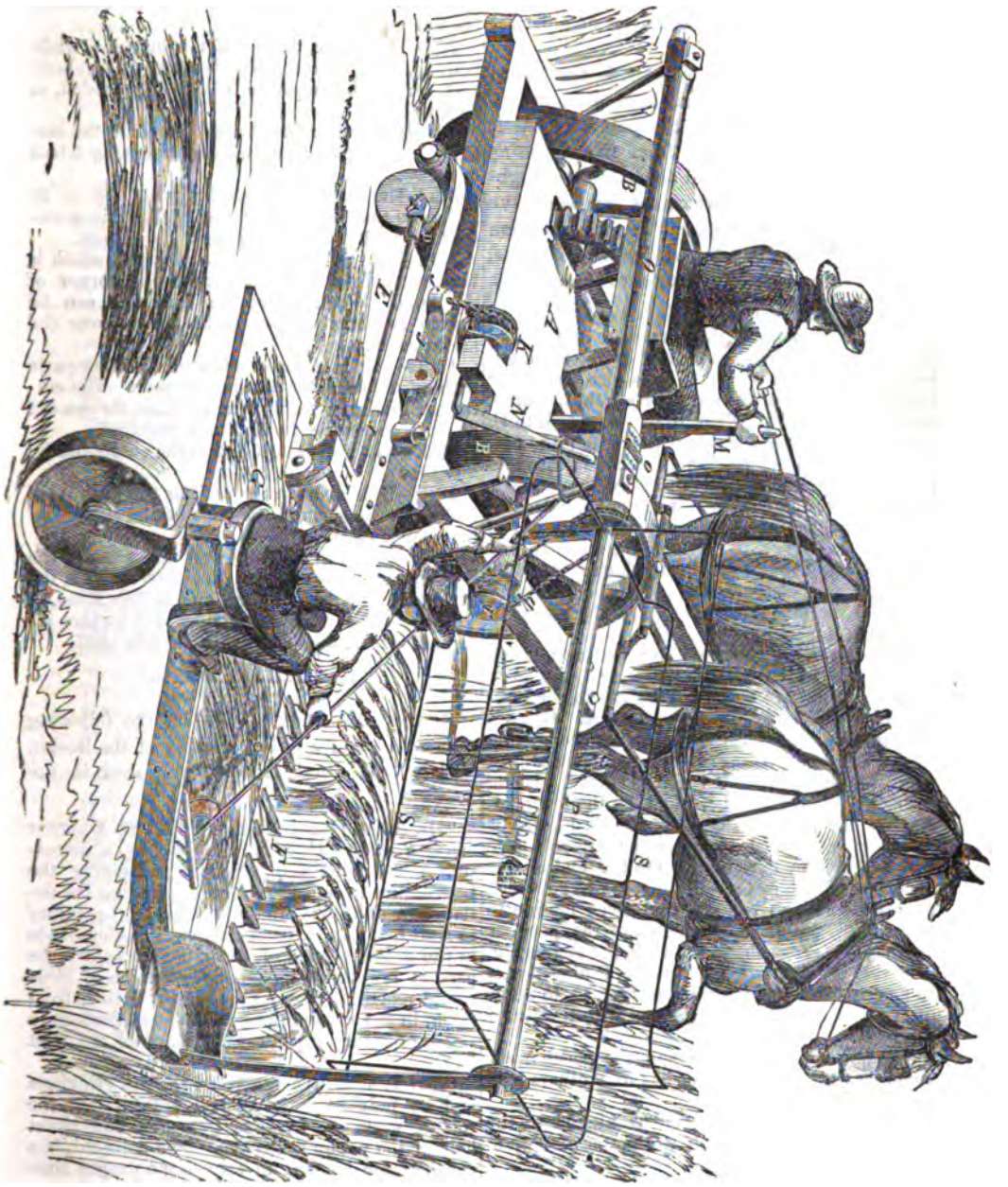
A THOUGHT FOR YOUNG MEN.

More may be learned by devoting a few moments daily to reading, than is commonly supposed. Five pages may be read in fifteen minutes; at which rate one may peruse twenty-six volumes of two hundred pages each in a year. You say you have none to guide you. The best scholars and men of science will tell you that by far the most valuable part of their education is that which they have given themselves. Volumes have been filled with the auto-biography of self-taught men. Think of Franklin, the printer, of Linne, the shoemaker, of John Hunter, the cabinet-maker, of Herschel, the musician, of Dolland the weaver, of Turner, the printer, of Burritt, the blacksmith. Love learning and you will be learned. When there is a will there will be a way.

Begin at once, take time by the forelock, and remember that it is only the first step that costs. and having begun, resolve to learn something every day. Strike the blow, and avoid the weakness of those who spend half of life in thinking what they shall do next. Always have a volume near you, which you may catch up at such odd minutes as are your own. It is incredible, until trial has been made, how much real knowledge may be acquired in these broken fragments of time, which are like the dust of gold and diamonds.—*Dr. Alexander.*

SAVING CABBAGES.

The best way to preserve cabbages green all winter, so that their good qualities shall in no manner deteriorate, is as follows: As late this month as the weather will allow, *dig out* your cabbages that you have set apart for winter use—dig trenches say eighteen or twenty inches apart, and from twelve to twenty feet in length, as may be most convenient, and in accordance with the quantity to be preserved,—*transplant* your cabbages firmly in these trenches, as closely as they will stand together. When your bed is finished, raise a platform some eighteen or twenty inches high over them, which can be made of any refuse posts, rails or boards about a place; across this place a few bean poles or lath, and upon the whole throw a quantity of bean haulm, cornstalks, straw or any other material of this kind, as a protection against wet and frost—and you can eat green cabbage up to April, finer than if plucked from the garden in October.—*Ger. Tel.*



VERMONT MOWER AND REAPER.

[SEE PAGE 113.]

In no one agricultural implement has more progress been manifested than in the harvester; from being a very rude combination of a pair of shears on a wheel, guided and moved by hand, it has quickly risen to the character of a perfect machine.

Among the numerous patents, is the one to which the above named has been given, and a description of which, with the points of merit of the machine, we copy from the *Scientific American*. Our farmers will do well to thoroughly examine the different machines now before the public, before purchasing, and in their selection be guided by their own knowledge of their wants, and the adaptation of the mower to those wants.

A is the platform, on which is raised the driver's seat, and to which the horses are attached to a pole. B is a wheel, connected by ratchet teeth to the axle of the wheel, C, as is also the other large wheel, both of them supporting the machine, and giving motion when drawn forward, to C. The ratchet teeth are so cut that when the machine is backed, no motion is communicated to C; and when it is desirable to draw the harvester anywhere, and the cutters are not required to be operated, the ratchets can be thrown out of gear by the lever, N. C gives motion to the bevel gear under the platform, which rotates the wheel, D, and consequently gives the necessary vibratory motion to the cutters, F, by means of the shaft, E.

The cutters are mounted on a platform, G, on the back of which is the raker's seat, the platform being well and strongly hinged to the casting, H, which is firmly secured to A. G has a tongue, or piece of iron I, projecting from it, on which the screw in the end of the lever, J, can exert pressure, by means of the cord, *j*, passing over the pully, K, and worked by the lever, M, so that the platform, G, and cutters, F, can be raised or depressed to overcome any obstacle which they may encounter. On the end of one of the wheels, B, is a small pully, *r*, around which passes the endless band, *q*, that gives motion to the reel, S, the arms of which are the peculiar and advantageous shape shown in the engraving. This reel revolves around the axle, P hinged at *o*, to a corresponding stretcher or tyer, O, to allow of it being elevated or depressed with the cutter platform.

The points of excellence and the peculiar advantages which this machine has over others may be enumerated as follows:

1st—In having the cutter-bar hinged to the frame so as to adjust itself to the unevenness of the ground.

2d—Having two driving wheels, so that if one slips the other will take the load.

3d—When the machine is moved to the right or left the knives are kept in motion by one or the other of the driving wheels.

4th—The motion of the cutters is stopped by the driver taking hold of the lever N, (as represented in the cut) which is attached to the clutch on the main shaft. During the process the gearing remains unmoved.

5th—The whole weight of the machine is on the wheels where it is required to give power to the stroke of the knives.

6th—When the machine is backed the knives cease to vibrate, consequently you back away from obstructions without danger of breaking the knives.

7th—The whole weight of the machine, while reaping, rests upon the wheels, except the raker's seat, for which a separate wheel is provided, as seen in cut.

8th—The cutter-bar, being hinged to the machine, can be packed up without removing a bolt or screw.

9th—The cutter-bar can be raised 18 or 20 inches so that the farmer can gather his grass-seed before he mows his grass if he choses.

10th—The cutter-bar is easily raised, which is very convenient when coming to the corner of the land. When raised, the machine can be turned as short as you please, or go over the mown grass.

11th—The machine is operated in all its parts without the operator leaving his seat. The cutter-bar can be raised and the machine thrown out of or in gear while in motion if required.

12th—The reel is adjusted to the cutter-bar by a joint.

13th—Bent slats on the reel for the purpose of reeling in the grain at the ends of the cutter-bar in advance of the rest.

There can be little doubt that this is one of the best among the numerous harvesters. It is the invention of Hosea Willard and Robert Ross, of Vergennes, Vt., who will furnish any further information. It was patented Nov. 8th, 1857.

ROBINS AND CROWS.—We cut the following from a report of a recent meeting of the Boston Society of Natural History, published in the *Traveller:*

"Dr. A. A. Gould observed that at a recent meeting of the Horticultural Society, a discussion arose upon a question of petitioning the Legislature to repeal the law concerning the destruction of robins and other birds, the injury to fruit being so extensive from their abundance in the neighborhood of Boston. He hoped the present law preventing the destruction of birds would remain in force, as the benefit derived from them, in the consumption of insects injurious to vegetation, far surpasses the value of the fruit lost.

"Mr. T. T. Bouve remarked that, in Hingham and its neighborhood, he had noticed that the robins' nests are invaded by crows and about half of the young destroyed. The crow exhibits considerable instinct in selecting a proper time for the depredation.

"Rev. Theodore Parker inquired if it had been noticed that the crow mates in families of three, generally one male and two females, an arrangement by which the duties of obtaining food and watching its young are better performed than by pairs. This he had observed, but he could find no notice of it in works on ornithology."

LINES FOR THE NEW YEAR.

It gives us much pleasure to publish the following very pleasant epistle from our friends, the publishers of "Webster's Unabridged Dictionary." The beautiful language in which the succession of the seasons is described, the picture of the farmer's winter fireside, and the peace and plenty which he shares after his season of labor, will commend it to our readers. We hope also, that the precept inculcated in the closing lines will be pondered upon, and the example followed by all who read these lines.

MR. FARMER:—

He of the foretop and the glass,
And swinging scythe, (how like the grass
Flung to the swath, though rank and tall,
Before his strokes we mortals fall!)
Again has passed his annual track
Along the changing zodiac,
From where his race he first began,
At old Aquarius with his can,
Still swift careering through the sky,
Past "Aries, Taurus, Gemini,"
Till, bearded Capricornus won,
The goal is gained, the circuit done.

First came the bright and gladsome Spring,
Rejoiced o'er hill and dale to fling
Her robe of green. Along her path,
Scarred by the storm-king in his wrath,
But now, as sprang the fragrant flowers,
Like Eden bloomed this world of ours.
Forth from his wintry hybernation
Comes man, "the lord of the creation,"
And "jocund drives his team afield,"—
The ripened sheaves his lands shall yield
Assured shall meet the waiting flail;—
"Seed-time and harvest shall not fail,"
The pledge, through time for aye t'endure,
The bow-sealed covenant makes sure,—
And on he guides the shining share,
Content, to win, the toil to share.

Then Summer, nymph of healthiest hue,
Came next, and o'er the landscape threw
Her heightening charm. From his bright throne
"With light and heat refulgent" shone
The glorious sun; at his broad blaze,
As down he pours his noontide rays,
Their herbage-cropping labor stayed,
The panting flocks seek the cool shade.
His scythe the stalwart mower swings
With vigorous arm; or out there rings
Right cheerily the music made
As with swift stroke he whets his blade.
Hard by, perched on some swaying bough,
The bobolink is singing now,
And fills the air with varying note,
As joy distends his tuneful throat.

Autumn succeeds,—a nut-brown maid;—
The garland fair that crowns her head
Of fruits and flowers together blent,
Her comrades, Peace and sweet Content.
The tiller from his burdened fields
Garners the full increase which yields
Still to her sons the generous soil,
And well repays their trusting toil.
The forest dons its bright array,
Like Joseph's coat in colors gay,
And soon the "sere and yellow leaf,"
Emblem of man's existence brief,
Reminds us, in our pathway found,
That Nature's course has ran its round.
The joyous birds of summer-time
Have sped them to some sunnier clime,
And now from out the upper sky,
While on in serried files they fly,
Honk! honk! comes down the wild-goose strain,
And still in one unchanged refrain,
As on from farthest Labrador,
They hast to seek the Antarctic shore.

Winter once more—an old man bowed,—
The winds without are piping loud,—
His locks are streaming in the blast;
The sky with stormy clouds o'ercast;
The streams congeal beneath his breath;
Life yields to torpor or to death;
And Earth, by snowy mantle prest,
Enjoys again its Sabbath rest.
And now, beside his evening hearth,
Such joys as only take their birth
From man's primeval occupation,
The farmer shares, and compensation
For summer's toil in winter's rest,
And garnered stores in peace possest.
The household band are grouped around,
In varied occupation found;—
One swiftly plies the "threaded steel"—
One caters for the morning meal,—
The manly boy, he who but now
Tedded the swath, or steered the plow,
To some school problem bends his brain,
Or, gallant, holds the tangled skein
For the fair hands that well, we trow,
Could weave a web should catch—a beau.
Full at his ease there, too, the sire.
"The kine are snug within the byre,"
Broadhorn, and Buck, and Dapple-Grey,—
Well-filled the crib, well-stored the bay,—
Before him lies his weekly sheet,—
From out his "loop-hole of retreat,"
Through this, ("*The Farmer*," 'tis, of course,)
He scans the world; its Babel hoarse
Comes, distance-mellowed, like the roar
Of far-off waves that strike the shore.
Here learns he of the "great commotion"
That moves men's minds, as tides the ocean,
Of fillibustering marauders,
Who live by rapine and disorders,—
Of stocks, defaulters, "bulls" and "bears,"
And all the turmoil of affairs,—
Panics, expansion and contraction,
Changes that drive men to distraction,
And thanks kind Heaven, in language graphic,
His not the lot of trade and traffic.
Yet not from care exempt *his* lot,
(For whose lives and suffereth not?)
And, nature-taught, knows he full well,
The frost that withers, opes the shell.
The sturdy steer across the new-shorn plain,
Yoked with his mate, drags slow the weary wain,
Nor knows he draws behind the precious load,
Whence the same hand that pushes now the goad,
When the storm beats, and wintry winds are chill,
With thoughtful care his daily crib shall fill.

* * * * *

Not blest as his is our employ,
Though once were we "the farmer's boy,"
And still each glad association
Turns to his honored avocation;
And so, to mitigate our grief,
Comes your hebdomedal relief:—
We *read* of brooks and running rills,
Corn-covered valleys, herd-crowned hills,
Of broods and breeds, root-crops and cereals,
Of Marrowfats, and Blue Imperials,—
Of reapers, red-top, and rotation,
Subsoiling, draining, irrigation,—
Of furrowed fields, and waving grain,
And boyhood's scenes are lived again.

As needs the axle lubrication,
That wheel, unfrictioned, have rotation;—
"As money makes the mare to go,"
And every *quid* should have its *quo*;—
As he that grinds should take his toll,—
The ox that treads, ungrudged his dole,—
And debts of gratitude be paid
At least in sound "materiel aid,"—
Please find enclosed in current bills
That which your requisition fills,
And, as without, were incomplete
Our joy, still send your welcome sheet;—
"Long may it wave,"—the tiller bless,
And still its shadow ne'er be less;
And unborn farmers, through the ages
Like us, be gladdened by its pages.
—Let "Uncle Sam" be prompt to carry 'em,—
Yours to command, G. & C. MERRIAM.

Springfield, January, 1858.

For the New England Farmer.

SUBSTITUTE FOR DEAR SUGAR.

The unprecedented prices of saccharine products have recently turned the attention of "Jonathan" to the subject, to see if there is no substitute to gratify his "sweet tooth," because he has been so long accustomed to this daily luxury, that it is out of the question to expect him to do without entirely, should the article again go up to even higher figures.

The maple of our norhern forests was put in requisition the past spring, and millions of pounds of sugar from the trees, have taken the place of the southern article. Even if a full supply could be obtained from this source, it could never compete successfully with the cane. Land kept in trees expressly for sugar, is worth many dollars an acre, and the annual taxes and interest are not always a trifle. The fuel used in evaporation, together with the labor attending it, will always prevent competition with cane, except when sugar is held at high prices. Another substitute for the southern cane is now offered in the sorgho, which, from recent experiments, promises a supply much below present prices. But even if it is produced at the lowest possible rates, it will yet be a tax somewhat formidable; we must furnish land to raise the cane; this must be plowed, planted, hoed, stalks gathered, crushed and pressed, and fuel used to evaporate the water in the juice. What all this labor, etc., will make it worth by the gallon or pound, now, or what it will cost when every arrangement for reducing the juice is fully established, it is impossible to tell.

These things are mentioned not to condemn or discourage the production of sugar by these means, when nothing else offers better; but as I am about to offer another substitute, I wish to make it appear as favorable in contrast as possible. We are not indebted to China for its origin, nor is the labor of the husbandman specially required in its culture. It is produced by forest and lawn, field and garden; even our very roadsides teem with abundance. I allude to the article of honey. Not one person in ten thousand has the least conception of the enormous quantity of this delicious nectar annually wasted at our very doors, all for the want of a due consideration of its importance. We make an estimate from the following facts in support of our assertion.

In the summer of 1856, there was collected from an estimated area of ten miles square, over 42,000 lbs. of honey. The number of stocks in spring was about 800, the increase by swarms, 400, after supplying deficiencies in the original number. 22,000 lbs. of this product (including glass boxes) was surplus or box honey; 12,000 was stored by the new swarms, (30 lbs. each,) 8000 was taken from the old and deficient hives, that had to be taken up. The amount in the old stocks for wintering the bees is not estimated. Ten miles square being an area of one hundred square miles, would give one square mile for every eight stocks, thus producing 420 lbs. of honey to the square mile. Taking these results as a basis for an estimate of what is wasted, we will see what was produced by this (New York) State alone, which contains 47,000 square miles. Supposing each square mile to produce 420 lbs., we have an aggregate of 19,740,000 lbs. Should we go further, and take the millions of square miles in the United States and Territories at the same rate, or a tenth part of it, it would go a great way towards furnishing us with sweet, at least in productive seasons. The probability is, that not a tithe of the honey produced on this area of ten miles square was collected, if we should judge by the number of stocks maintained on a square mile in some parts of Europe. Quotations by Mr. Langstroth state: "In the province of Attica, in Greece, containing forty-five square miles, there are kept 20,000 hives." "East Friesland, a province in Holland, containing 1,200 square miles, maintains an average of 2000 colonies per square mile."

The summer of 1857 produced only about one-quarter of the fore mentioned results. The one season being the *best*, and the other the *poorest* we have ever known, the two together would make an average of about 26,000 lbs. that might be expected annually from that number of stocks. Taking this average as a data, what would be the cost per pound? One man can take charge of one hundred stocks, or one-eighth of the whole, but it would require only about two months of his time in the year; yet nearly another month would be required by a mechanic, or a man sufficiently skilled to use a handsaw and hammer to make hives, boxes, &c.; say the labor would be $75, cost of materials, $50. Now if no interest is reckoned for money invested, this honey costs less than four cents per pound. But if we take the price that honey often commands in market, about 20 cts., the 3250 lbs. (the average amount that 100 stocks would collect,) will amount to $650. Deduct the expenses, $125, and there will be left $525 for the annual profits of bee culture, which ought to be enough in one season to pay all necessary costs in purchasing stocks to start an apiary of that extent. Several instances are known, where the products sold, aside from the increase of stocks, was more than sufficient to pay all charges in care, as well as the original cost of the apiary. This is paying very well for labor and money invested. What pays better? We have shown, conclusively, it would seem, that there is sufficient material in the country for extensive operations. We have shown also, that its collection is a practical, and at the same time, a profitable business. All that now seems wanting to render this product available, is the energy to

acquire the requisite skill for proper management. By a few this *has been* acquired by patient, persevering effort, sufficient, at least, to succeed for many years, without any aid but what was gained by experience. It is now quite different. The inexperienced can, if they choose, take the shorter route, by appropriating to their own use the experience of others, found in the numerous treatises on the subject. M. QUINBY,

Author of Mysteries of Bee-Keeping Explained.

St. Johnsville, N. Y., 1858.

LEACHED ASHES FOR MANURE.

We are fully aware how much public opinion has changed with regard to the value of leached ashes as a manure, but at the same time have reason to believe that large quantities of it are suffered to be wasted, and that, even within the circle of our intelligent readers, there are some cultivators who do not properly appreciate it yet. We propose, therefore, to place before the reader the opinions and experiments of some others, to give force to what we have often stated ourselves in regard to the value of this article.

Mr. COLMAN, in his valuable "Report on the Agriculture of Massachusetts," in some observations relative to the value and efficacy of the manures used by the farmers of this State, says: "ashes, leached or crude, have been applied by different individuals with various success. A farmer of high authority in Newbury states—'I think leached ashes very valuable to spread on grass land; likewise for onions and grain. I use twenty or thirty cart loads a year, and gave this season $3 per load of fifty bushels.' Another respectable farmer says 'he deems them of no use unless applied in conjunction with other manure, and then of great efficacy. In their application upon a rich loam to corn, both in the hill and spread round the hill at the first hoeing, I have seen no beneficial result from them.'"

The question naturally arises here, whether, if the corn had been planted on a *poor loam*, or on a *poor gravelly soil*, and part of the crop had been treated with ashes, and a part not, there would not have been a marked difference between the two? But the ashes was applied on a *rich loam* that would have brought a good crop alone. That is not the best mode of testing special manures.

Judge BUEL, of Albany, a man whose pen cast light upon many subjects, and whom we cannot accuse of having given currency to a single sophism, in the long course of his most arduous and philanthropic efforts to ameliorate the condition of American agriculture, says:—"leached ashes, or soap-boiler's waste, which contains always a quantity of lime, I have used with advantage for wheat;" and another distinguished writer, whose labors have, like those of the individual first named, been the means of arousing and directing inquiry on many important topics, remarks:—"Leached ashes I have always found to be a most genial and efficient manure. As a top-dressing for grass lands—applied at the rate of twenty-five or thirty bushels per acre, according to circumstances, they are unsurpassed. They correct acidity, and sweeten the soil, and have a powerful effect in warming and imbuing it with energy and life. I consider them an economical and desirable manure at seventeen cents a bushel, even where I am compelled to draw them from three to eight miles."

We have often witnessed the good effects which Judge Buel describes, and not only on grass lands, by which we suppose he means mowing lands,—but on pastures which had become greatly impoverished, and even partially covered with moss.

In the *Farmer's Cabinet* an intelligent correspondent observes:—"Of all things to make grass grow, ashes beat; this you may depend upon, for I have tried it often, and it has never failed yet. Collect as much of it as you can, the more the better, and spread it over your grounds, and *see if I am not correct in my assertions.*"

A writer in the *Farmer's Journal*, observes:—"I do not see wood ashes very often spoken of as a manure, in our agricultural papers. I am inclined to think that they are not valued so highly as they deserve. I have had a pretty favorable opportunity for observing their effects. In my boyhood, a soap-boiling establishment was set up in the neighborhood in which my father lived, in which large quantities of wood ashes were used. The man who carried it on had a farm of about a hundred acres, which, under a faulty system of management, had got very much run out, and the owner was getting every year more and more in debt. After he commenced soap-boiling, there being little demand for his leached ashes, he applied them liberally to his land, and soon, from being one of the poorest, his farm became decidedly the most productive in the town. His crops repeatedly obtained the premiums at the county cattle shows. I think I never knew so great a change produced on a farm in so short a time. It was a subject of general and admiring observation. By the increased productiveness of his farm, added to the profits of his soap-boiling he soon freed himself from his pecuniary embarrassments, and at his death he left to his children not only a farm free from all incumbrances, and in a high state of cultivation, but also considerable other property which he had accumulated. The soil of the farm was light, inclining to sandy."

With these facts before us, and many others which are constantly occurring, it would seem that sufficient evidence has been accumulated to

convince the most skeptical minds on this subject. In our travels through the State we frequently see piles of brush and rubbish of various sorts, carried away from the fields to the road-side or other uncultivated spots, and there burned,—thus two errors are committed; first in the loss occasioned by not burning upon fallow land, or land that is intended to be plowed,—and secondly, by fertilizing in a high degree the road-side, and stimulating it to produce thistles and burdocks, which shall annually scatter their seeds broadcast over the contiguous fields. There is room yet for considerable more *head work* on the farm!

For the New England Farmer.

ESSEX TRANSACTIONS.

By the kindness of a friend, I have just been favored with a copy of the transactions of the Essex Agricultural Society for 1857. If I do not mistake, this will be found equal, if not superior, to any of the annuals put forth by this Society. Although Essex cannot boast of the quality of its soil, or other natural advantages, still it has ever had reason to be proud of the industry and intelligence of its citizens. In proof of this no better evidence is needed than is found on many of the pages of this pamphlet, exceeding two hundred in all, neatly printed at the *Herald* office, in Newburyport.

First comes Dr. Kelly's address on "home and its embellishing arts," containing many suggestions worthy of careful regard, expressed with pleasant humor and wise consideration. Then the accomplished Secretary's report of the show, and practical advice for future use. The report of that veteran in fruit culture—known and respected by every gardener in the land. An agricultural show in Essex without the name of IVES appended, would be an entire misnomer. Then there is a beautiful essay on the culture of the strawberry, by one who demonstrates that he knows of what he writes. Then come the flowers of the field and the garden, displayed with all the adroitness of a Sanborn, who never fails to excite your risibilities. Then the truly philosophic views of vegetable culture by an expert in these matters, from the rock-bound shores of Marblehead. Then the reports of the several committees charged with active duties on the day of the show, containing many suggestions of value—although not quite as full as they should have been—for what is the use of a show if its peculiarities cannot be recorded for instruction? Then we have a report on farm implements, drawn by a veteran in the service, and condensing the best intelligence yet brought out, though leaving much lee-way for more to be learned. Then comes the report of the committee on farms, which will bear a second perusal. Then Mr. How's suggestion as to the improvement of pasture lands, the necessity of which will be apparent to every one who journeys through the commonwealth. Root crops are also noticed, as no agricultural report of Essex would be complete without these. Then come elaborate experiments on the Chinese Sugar Cane, from which syrup is extracted, but no sugar is matured. Then inquiries as to the management of an "experimental farm," generously donated to the Society by the late Dr. Treadwell, of Salem. Such is a bird's eye glance at the contents of this pamphlet.

ESSEX.

Dec., 1857.

TO MANAGE A REARING HORSE.

Whenever you perceive a horse's inclination to rear, separate your reins and prepare for him. The instant he is about to rise, slacken one hand, and bend or twist his head with the other, keeping your hands low. This bending compels him to move a hind leg, and of necessity brings his fore-feet down. Instantly twist him completely round two or three times, which will confuse him very much, and completely throw him off his guard. The moment you have finished twisting him round, place his head in the direction you wish to proceed, apply the spurs, and he will not fail to go forward. If the situation be convenient, press him into a gallop, and apply the spurs and whip two or three times severely. The horse will not, perhaps, be quite satisfied with the first defeat, but may feel disposed to try again for the mastery. Should this be the case, you have only to twist him, &c., as before, and you will find that in the second struggle he will be more easily tamed than on the former occasion; in fact, you will see him quail under the operation. It rarely happens that a rearing horse, after having been trained in the way described, will resort to this trick a third time.—*British Sportsman.*

THE USE OF BONES.

A. E. Schmersahl, of England, has patented an improvement in the manufacture of gelatine, glue and manure from bones. The patentee obtains bones, and separates from them blood and such other substances which are soluble in water, so as to deprive them of putrescent matters, which, according to the usual manufacture, become mingled, or partially so, with the gelantine, &c. The bones thus purified he treats with an acid, in order to dissolve the phosphate, or other salt of lime, leaving the gelatine in a solid state, which after being washed, may be used as an article of commerce, or boiled into a paste or jelly, ready for immediate use. The liquor in which the bones have been macerated he reserves, and extracts therefrom phosphorus or sal-ammoniac, and superphosphate of lime, applicable as a manure.—*S. American.*

COLOSSAL WALNUT TREE.—On the road from Martel to Gramant (Lot) is to be seen a colossal walnut tree, at least 350 years old. The height of this tree is about 55 feet; its branches extend to a distance of 125 feet; the trunk, 14 feet in diameter, is only 20 feet high, but it sends out seven immense branches.

It bears on an average each year 15 bags of walnuts. Older trees grow near, but they are of very moderate dimensions.—*Galignani's Mess.*

☞ On Monday, the 11th inst., two large flocks of wild geese were seen flying over East Hartford, Conn., on their way northward.

For the New England Farmer.

ERRORS IN BOOK FARMING.

MR. EDITOR:—So contradictory are many of the statements concerning agricultural operations, published in agricultural journals, and recorded in "the books," that it is hardly to be wondered at that so many farmers decry "book farming," or that the new beginner should despair of ever being able to pursue the business of farming upon any reliable basis or settled principles of action. Now while it is partly true that agriculture is not one of the exact sciences, there is still a vast amount of settled fact concerning its practical pursuit, and many of these facts can be reduced to rules, as certain in their operations as the rules of any of the exact sciences. Rules of science are established upon well defined facts, and facts are rendered thus available only by patient investigation of the conditions under which they are developed. Now every fact that is a fact in agriculture, is so only upon certain conditions, and if in the application of any one of these facts we overlook, neglect or ignore these conditions, the fact may prove a stumbling-block in our way instead of aiding us in our labors. It is from the superficial manner in which experiments in agriculture are often made, and their results given without intelligent observation of the circumstances and conditions on which they are based, that so many errors and contradictions occur in "book farming," and which robs this source of knowledge of much of its real value and usefulness. I have been led to these reflections from noticing an article in the *N. E. Farmer* of Dec. 19th, entitled "Little Things by the Way-side," cautioning farmers against feeding corn fodder to milch cows, because it would decrease their milk. Now not only myself, but hundreds of better farmers, know the value of corn fodder, both dry and green, for milch cows, too well not to know that such advice is absurd and contrary to all intelligent experience. That green corn fodder is often fed to milch cows without profit I have no doubt; when, for instance, it is fed in such a manner as, while it is insufficient for the animal's entire food, it begets a dependence upon this extra feed, and renders the animal indisposed to seek other and more feed from the pastures. But it is a fact well established that corn fodder, both dry and green, when intelligently fed out, is one of the best milk-producing fodders amongst the list of grasses.

Again, if it be true, as stated in an editorial in the last issue of the *N. E. Farmer*, (Dec. 26th,) that Hon. Elmer Brigham, of Westboro', obtains an extraordinary amount of milk from his cows, by feeding only twelve lbs. of hay and two quarts of meal each per day, surely Mr. Brigham must have discovered the means of making milk (real cow's milk) out of almost nothing—a discovery more valuable to a hungry world than would have been the discovery of the long sought "philosopher's stone," which was to turn everything into gold. But I apprehend that here, too, is another "error in book farming;" since every intelligent farmer knows that a milch cow cannot be profitably sustained upon any such quantity of food. Not less than twenty lbs. of good hay per day will well sustain an average size milch cow during the feeding season; and this quantity will not produce a liberal flow of milk unless grain or roots be added thereto.

By reference to the Report of the Massachusetts Board of Agriculture for 1855, it will be seen that, in a series of very carefully conducted experiments upon the feeding of stock, the average quantity of dry fodder actually consumed by thirteen milch cows for twenty days in February was nineteen lbs., together with twenty lbs. of carrots and five lbs. of cob-meal—each per day—while seven dry cows consumed in the same time twenty-one lbs. of dry fodder each per day; and for the next twenty days the same milch cows consumed nearly twenty-three lbs. of dry fodder, (it not being of quite so good a quality,) together with twenty-five lbs. carrots and five lbs. cob-meal each per day, while the dry cows consumed each per day nearly twenty-seven lbs. dry fodder and twenty lbs. carrots. These results perfectly correspond to the general experience of all farmers who have taken the trouble to ascertain by weight the amount of food required by the average of cows. Animals require *quantity* as well as *quality* of food. The philosophy of feeding our farm stock has been but little attended to by farmers generally; yet it is a field of inquiry which will pay as richly for investigation as any the farmer can explore.

If these remarks shall serve to correct the "errors" alluded to, something will have been gained towards advancing the usefulness of that valuable—though often much abused source of knowledge—*"book farming."* T. A. S.

Westboro', Jan. 9, 1858.

For the New England Farmer.

SUGAR CANE SYRUP.

MR. EDITOR:—Last spring, hearing a good deal about the *Sorghum* or Chinese sugar cane, and wishing to know more about it, I procured some seed and planted a small patch containing about one-fourth of an acre, planting it very thick in drills, for fodder, not having any idea that it would make molasses, as it was late when I planted it, and it did not fully ripen; but having read in the papers that molasses had been made from it, I concluded to try it and know for myself. I made a wooden mill on the same principle of a cider mill, with which I could press out, (using one horse,) from one hundred and fifty to two hundred gallons of juice a day, and procuring a sheet iron pan four feet long, two feet and a half wide and one foot deep, I commenced proceedings. In the first place, I set two upright posts in the ground, about six feet apart, and building a fire between the two posts, I suspended the pan over the fire, and having some juice already expressed I commenced boiling down, adding more juice as it boiled away, and skimming off the skum as fast as it would rise, while at the same time my man was expressing it as fast as I had occasion to use it. I would generally boil all day, commencing in the morning and adding more juice as it boiled down, and at night I would have from fifteen to twenty gallons of good, nice syrup, as good or better than most West India molasses. After I had commenced making syrup, I bought all I could of the cane from my neighbors, and obtained one hundred and five gallons

of syrup, which will sell readily at one dollar a gallon here.

There are a number of people here that are going to try the business next summer, and I think I will continue it myself. I have not succeeded in making any sugar, and if any of your subscribers will inform me, through your paper, the manner of making it, I would be much obliged. Can you inform me of the best mill for crushing the cane and where the iron rollers or cogs can be obtained, and what will be the price? THOMAS SHACKLEY.

Grinnell, Poweshirk Co., Iowa.

For the New England Farmer.

STEAM PLOWS.

BY HENRY F. FRENCH.

At Ipswich, in England, on the fourth of July, 1857, I saw in operation Fowler's Steam Plow. Having previously seen at the workshop of Ransome and Simes the same implement, and having had its principles of operation carefully explained, I spent several hours with it while in actual work upon a large field, where it had already plowed many acres. It was, while I observed it, turning furrows seven inches deep by about ten in width, carrying three at a time, and performing its work as well as it could be performed in the usual way, with horses. I carefully paced out the length of furrows, and measured their depth and width, and with my watch in my hand timed the operations, and ascertained that the machine was then plowing one acre per hour.

The arrangement was to use four plows and open four furrows at each passage across the field, and in that way the labor accomplished would be one-third more. It is difficult, without drawings for illustration, to describe intelligibly the details of such an implement, but its general plan of operations may be readily understood. The plows are arranged in two gangs of three or more, one gang at each end of a heavy frame-work, which is balanced across an axle supported by two large wheels like those of a heavy gun carriage. This framework, with the plows, is drawn across the field by a stationary engine. As it is drawn northerly, for example, in its work, the frame which carries the plows is borne down, so as to lift the gang of plows at the northerly end high into the air, bringing down the southerly end with its plows so that they enter the soil for plowing. The depth is guaged mainly by a large wheel at each end of the frame-work, opposite the plows, which wheel is in turn lifted into the air or brought down to the surface with the gang of plows to which it belongs.

Two men sat upon the machine, one to guide its motion by appropriate machinery, the other to make signals with a flag, or do any other useful work that occasion might require.

The engine in use was upon one side of the field, and was called a stationary engine. It was drawn to the field by horses, but had powers of locomotion sufficient, I think, to move itself along the head land. The plow was drawn *towards* the engine by a wire rope, which was wound round a cylinder attached to the engine. It was drawn *from* the engine by a wire rope which passed across the field round a pulley made fast at the opposite headland. This pulley was held by what was called an *anchor*, which anchor was in the shape of a four-wheeled low cart or car, loaded heavily with stones. The wheels of this car were of iron, and sharp at the edges, so that they cut down nearly to the axle. This anchor was drawn along the headland by a windlass worked by a man, in a direction at right angles with the furrow, so that the strain upon the pulley was across the track of the wheels. In justice to the inventor, it should be stated, that he had already, it was said, constructed machinery to be worked by the engine to move the anchor, and so dispense with the man at the windlass.

It will be seen at once, that this machine could only be of practical utility on level, clear fields, of large extent. It could be used only upon level fields, or rather fields of uniform surface, because the plows are set in an unyielding frame, and must run at the same level, thus running deeper across a hillock, and more shoal in a small depression. They are arranged, not so as to be raised and depressed each separately, as the machine is moving, but the whole gang are acted upon at once. Again, the machine would be of no use in a small enclosure, because of the broad headlands requisite to accommodate the engine on one side and the anchor on the other.

It could be of little use in a field obstructed by stumps or roots or stones, because of the inequalities of surface produced by them, and because if one of the plows meets an obstruction too obstinate to yield, the power of the engine must generally be sufficient to break the plow, or what is more common, the rope. The breaking of a plow must involve, at least, the necessity of a delay sufficient to detach it and substitute another, and such a delay, of so large and expensive a force as we shall presently see is employed, must be of considerable importance. The breaking of the rope, which I was informed by the workmen was of frequent occurrence, is soon remedied by splicing it, but is probably a constant source of annoyance. As, however, it is impossible to foresee all obstructions, and the engine must exert great power, it is perhaps best to make the rope the weakest part of the machinery, as it is the most easily repaired.

The force employed in this operation, as I witnessed it, besides the engine, consisted of five

men and a boy; to wit, the engineer, who remained by the engine, a boy to carry coal, one man upon the plow, to manage it, another man who rode part of the time on the plow, and who ran along before it to remove pulleys or rollers over which the rope traversed to keep it from friction on the ground, another man to tend the windlass and anchor, and the other to keep the rope in place with a crow-bar, that it might wind properly round the drums at the engine. In estimating the value of such an implement as this, there are certain elements always to enter into our calculation. 1st, The amount of labor performed. A span of horses and a plowman would in England plow, as a regular day's work, one acre of such land as that under experiment. They would work six hours without feeding, and in that time complete the day's work. This is the practice, I think, in most of England, as to working horses. Six plowmen and twelve horses, then, would for six hours perform the same work as the five men and boy and the engine and all the machinery. But the engine would not then be fatigued, but might labor on while the horses must rest. Still, taking into account the liability of complicated machinery, and of so great a length of rope to accidents, which must cause delay, perhaps the steam plow could hardly be expected to be actually at work more hours per day than the horses. 2d, The expense and time employed in moving the engine and plow and anchor on to the field of operation, and placing them in position. I did not see the engine or machinery moved with horses, but this item is worth a place in our estimate, both as to expense and time. 3d, The cost of working, which has been already partly considered, but there is to be added to the cost of the labor already named, the expense of supplying the engine with fuel and water. Both the coal and water are of heavy freight, and must be conveyed to the engine by horses and men. Their cost, at the field, must depend so much on locality, that it is useless to attempt an estimate. Probably an additional pair of horses and a man would be usually employed to supply the meat and drink of the steam giant. 4th, The cost of machinery and of repairs upon it. It was said that this engine and plow could be furnished ready for use for £500, or $2500. It would require an engineer to estimate the cost of repairs. Unless the machine could be kept in constant use, the interest on its cost would be a heavy item, and in all cases must be a constant element to be regarded. The engine would be adapted to other farm labor, such as threshing, grinding and the like. Such engines are in constant and extensive use for threshing, throughout England, on large farms. The inventor of this steam plow had taken a large contract to plow for several proprietors, a practice which, perhaps, should be kept in view in this discussion, though the difficulty of moving the engine from farm to farm in this country would be far greater than in England, because our roads are not so well made.

Upon the best estimates that I have been able to make, it seems to me that Fowler's steam plow can never be made an implement of general practical utility, either in this or any other country. Perhaps a more competent person, with such data as have been furnished, may form an estimate more favorable. Simplicity is usually economy, in agriculture especially, and there does not seem upon the theory of this machine any such promise of performance as to compensate for the great expenditure in its structure, and the numerous obstacles to its practical operation.

A large premium has been offered by the Royal Agricultural Society for a useful invention of a steam plow, and under this stimulus three competitors entered the field at their exhibition at Salisbury, in England, which I attended in July, 1857. Fowler's Steam Plow, which has already been described, was one of them. Another, called Williams' Patent, drawn by a stationary engine with ropes, and guided partly by a horse in a pair of shafts, appeared not to satisfy the exhibitor himself in its operations. It differed from Fowler's in this, that it had to be turned at the end of the furrow instead of running back and forth with a double set of plows. All the objections to Fowler's plow seemed to apply to this also. The third, operating on an entirely different plan, deserves a more particular notice in a future number.

For the New England Farmer.

TURNIPS VERSUS WITCH-GRASS.

Witch-grass, or "*Quacks*," as it is called here, is very troublesome in this vicinity. Having about one-fourth of an acre last spring completely covered with it, I was desirous to find some means to destroy it. The soil was a sandy loam, sand predominating. I knew that frequent plowing and harrowing, in dry, hot weather, would kill the weed, but I wanted to find some means of exterminating it, and at the same time to raise a crop that would pay for the labor. While reflecting upon the best method to pursue, an article appeared in the *New England Farmer*, Vol. IX., p. 162, which induced me to try a crop of turnips. Accordingly, I had a pretty liberal dressing of manure from the barn-yard applied and plowed under, and the ground well harrowed. After a few weeks it was plowed and harrowed again, and a *wagon-load* of grass roots was raked up and drawn into the middle of the highway. About the 20th of the 6th month, the plowing and harrowing were repeated, and the 24th it was sown with ruta-buga seed, *as I supposed*. The seed was sown by hand in drills two feet apart. It came up well, but in a few days it became evident that I had been deceived in the seed, and that in-

stead of ruta-baga, a *poor, purple-topped, tap-rooted variety* of early turnip seed had been sold to me. A small quantity of seed purchased earlier in the season was mixed with this, and proved true. Whether the seedsman or his agent was in fault I cannot say, but the fact that farmers are occasionally imposed upon in this manner, should induce them to raise their own seed, especially such varieties as are sown in considerable quantities.

In due time the ground was hoed three times, and the plants thinned, and in the fall 150 bushels were harvested. Had I not been *cheated* in the seed a good crop would have been raised. However, I may as well make the best of it.—My main object was nearly accomplished. The "*Quack*" was so well subdued that but little appeared in the fall, and I think good culture next year will subdue it entirely.

KING PHILIP CORN.

I planted two ears of this variety last spring from which I raised not less than two *bushels* of sound, shelled corn. I took the first premium at our County Agricultural Fair, a merely nominal gratuity, however, as Indian corn was not enumerated in the list of articles for specific premiums. I would advise all who plant corn to try the "King Philip."

BUGS ON VINES.

They attacked mine last spring, as usual, but a mixture of about four parts ground pepper and one part flour, sifted on when the leaves were wet proved too strong for them. If rain washes it off, repeat the dose. What will destroy the corn, slug or "*cut worm?*" L. VARNEY.

Pictou, Prince Edward County, C. W., 1st Mo., 1858.

For the New England Farmer.

BORERS.

Do borers winter in the ground and ascend the tree again in the spring? In the fall of 1856 I noticed that my young peach trees were attacked with borers; I examined their holes with a sharp knife and a wire, but could not find a single borer.

In the early part of May, 1857, I again looked at the trees, and was surprised to find, under the bark where they worked the year before, so many borers of all sizes, from full-grown ones to those but just hatched; they all appeared to be going up the tree, and I took twenty-five or thirty from some of the trees.

This fall the trees were not affected by them.

Barre, Dec., 1857. W. A. P.

REMARKS.—We make the following extract from Prof. HARRIS'S "Insects Injurious to Vegetation," which explains the habits of the Borer.

"The pernicious borer, which, during many years past, has proved very destructive to peach trees throughout the United States, is a species of *Ægeria*, named *exitosa*, or the destructive, by Mr. Say, who first scientifically described it in the third volume of the 'Journal of the Academy of Natural Sciences of Philadelphia,' and subsequently gave a representation and account of it in his 'American Entomology.' In the fifth volume of the '*New England Farmer*' I have given the history of this insect, have mentioned the principal authors who have noticed it, and recommended preventive measures, which have been found effectual in protecting the peach tree from its most serious attacks. The eggs, from which these borers are hatched, are deposited, in the course of the summer, upon the trunk of the tree near the root; the borers penetrate the bark, and devour the inner bark and sap-wood. The seat of their operations is known by the castings and gum which issue from the holes in the tree. When these borers are nearly one year old, they make their cocoons either under the bark of the trunk or of the root, or in the earth and gum contiguous to the base of the trees; soon afterwards they are transformed to chrysalids, and finally come forth in the winged state, and lay the eggs for another generation of borers. The last transformation takes place from June to October, most frequently, however, during the month of July, in the State of Massachusetts. Here, although there are several broods produced by a succession of hatches, there is but one rotation of metamorphoses consummated within a year. Hence, borers, of all sizes, will be found in the trees throughout the year, although it seems necessary that all of them, whether more or less advanced, should pass through one winter before they appear in the winged state. Under its last form, this insect is a slender, dark blue, four-winged moth, having a great resemblance to a wasp or ichneumon fly, to which it is sometimes likened. The two sexes differ greatly from each other, so much so, as to have caused them to be mistaken for two distinct species. The male, which is much smaller than the female, has all the wings transparent, but bordered and veined with steel-blue, which is the general color of the body in both sexes; the palpi or feelers, the edges of the collar, of the shoulder-covers, of the rings of the abdomen, and of the brush on the tail, are pale yellow, and there are two rings of the same yellow color on the shins. It expands about one inch. The fore wings of the female are blue and opake, the hind wings transparent, and bordered and veined like those of the male, and the middle of the abdomen is encircled by a broad orange-colored belt. It expands an inch and a half, or more. This insect does not confine its attacks to the peach tree. I have repeatedly obtained both sexes from borers inhabiting the excrescences which are found on the trunk and limbs of the cherry tree; and moreover, I have frequently taken them in connexion on the trunks of cherry and of peach trees. They sometimes deposit their eggs in the crotches of the branches of the peach tree, where the borers will subsequently be found; but the injury sustained by their operations in such parts bears no comparison to that resulting from their attacks at the base of the tree, which they too often completely girdle, and thus cause its premature decay and death. The following plan, which was recommended by me in the year 1826, and has been tried with complete success by several persons in this vicinity, will effectually protect the neck, or most vital part of the tree, from injury. Remove the earth around the base of the tree, crush and destroy the cocoons and borers which may be found in it, and under the bark, cover the wound-

ed parts with the common clay composition, and surround the trunk with a strip of sheathing paper eight or nine inches wide, which should extend two inches below the surface of the soil, and be secured with strings of matting above. Fresh mortar should then be placed around the root, so as to confine the paper, and prevent access beneath it, and the remaining cavity may be filled with new or unexhausted loam. This operation should be performed in the spring or during the month of June. In the winter the strings may be removed, and in the following spring the trees should again be examined for any borers that may have escaped search before, and the protecting applications should be renewed."

LETTER FROM MR. BROWN.

Washington, Jan. 19, 1858.

MY DEAR SIR:—The United States Agricultural Society closed its sessions on Friday, the 15th. During that day there was a long and animated discussion upon the feasibility of raising the *Sorghum* and the *Imphee*, and their respective merits. The Imphee is an African plant, and is thought by some persons to be superior to the Sorghum for the purpose of fodder, syrup or sugar. Mr. LEONARD WRAY was introduced, and stated that he had been a sugar planter in the West and East Indies, and also forty years in Caffraria, Africa, and that he discovered the Imphee in Caffraria, and from that place had introduced the plants into Australia, New Zealand, France and Algeria, and on the American continent from Canada southward to the Brazils. Having gone to the Cape of Good Hope, he heard so much there of the beauty and fertility of the country about Port Natal that he went thither, and liked it so well as to stay there three years. It was here that he met with the Imphee. This plant will not yield much sugar when grown in rich saline swamps where salts of iron prevail, but is rich in saccharine matter when grown on warm, sandy loams. He thinks the Chinese sugar cane was taken originally from Africa by the Portuguese. The seed of the Chinese sugar cane is black—that of the Imphee is white, and will produce from 50 to 250 bushels an acre, is made into flour and produces good bread. The discussion on the topic of the sugar canes was long, and sometimes exciting considerable sensation, as Mr. Wray thought the Patent Office had interfered to prevent the sale of the Imphee seed and the introduction of the plant. Dr. CHARLES T. JACKSON, of your city, was present, was called upon, and his statements were listened to with marked attention.

When this "vexed question" had been hushed, Dr. HIGGINS, State Chemist of Maryland, made an interesting report upon the subject of *Hog Cholera*. He declared the disease, though popularly called *cholera*, to be properly a *Pneumonia*, the seat of lesion being in and around the lungs, and not the bowels. The remedies are therefore like those in a case of epidemic. The cause of the disease lies in an excess of fibrin in the animal's blood, which makes it too thick, and consequently unable to pass with the requisite facility through the arteries of the lungs. Hence the necessity of an alkaline carbonate is indicated, and he had found a mixture of *equal quantities of carbonate of soda and barilla* to be a perfect curative. His rule was to give two grains of the mixture in swill three times a day to each hog, and it had been in all cases successful, when the case was not too far gone. Dr. HIGGINS remarked, in answer to a question put by a member, that the value of the hogs which died last year amounted to several millions of dollars. He had seen them die in as large a number as five hundred in a day! This disease was not confined to the South and West alone—a great number were lost in New England, probably at the rate of seven out of ten of many droves of hogs sent there. If this simple remedy shall prove as effectual as has been represented, this fatal scourge may be arrested.

The business of the session now being closed, the President, Gen. TILGHMAN, rose, and in a short and appropriate address, adjourned the Society to meet again next year.

All the sessions of the Society have been marked by an earnest zeal which indicates an interest in the cultivation of the earth that promises much for the future. Massachusetts was well represented in these councils. I saw present from that State, Messrs. French, Brooks, Newell, Phillips, Flint, Loring and Chandler. If these gatherings, and the transactions of the Society, do not strike out any new and heretofore untrodden path to the agriculturist, they cannot fail to awaken new efforts in many, and arouse an emulation in the art which will greatly increase the products and the profits of culture. Beside this, they certainly have a tendency to cherish feelings of friendship and regard between the citizens of different sections, and to introduce to each other the various improvements and progress in agricultural art.

Our meetings have taken place in what is called the "East Room" of the Smithsonian Institution; it is the room in which the philosophical instruments are deposited, but contains maps, and drawings of fishes and animals, and among the rest what is called "*A Marine Aquarium.*" This is a case about five feet long by eighteen inches high, and three feet wide. It stands upon a frame, the height of a common table, upon which rests a white marble slab; into this slab grooves are cut near the edges, into which thick plate glass

is fitted, so that it is water tight, and the whole is covered with wire gauze. Sea sand, pebbles and rocks are then placed in it, together with a variety of sea plants, and several species of animals, and then the tank or case is filled with sea water; this affords the beholder an opportunity of observing not only the animated life, but the habits of the animals themselves, which have heretofore been hidden from mortal view.

In this miniature ocean there are *thirty-eight* kinds of animals, including the order of *Fishes*, *Crustacea*, *Worms* and *Polypi*. In the order of fishes are the *Toad-fish*, *Butterfly-fish*, *Sea-horse*, &c. The latter is a most singular and interesting creature; his head so nearly resembles that of a horse as to preclude all thought of a comparison with anything else,—and he carries it as proudly as that of any steed that ever bounded over the turf. But all the rest of him is tail! He is perpendicular! He rises to the surface with all the dignity of a war-horse, or sails into mid-ocean with the majesty of an autocrat, and surveys the peopled world beneath his realm! The broad shoulders immediately below the head gradually dwindle to a long, flexible tail, which, when at rest, is gracefully coiled. On the back, just below the head, is a small dorsal fin, so delicate and transparent as to escape observation, unless to a critical eye;—there are also fins of the same kind on the body. The last time I saw him he had a sea-serpent in the embrace of his tail, where he held him for a full half hour, his head rising to mid-ocean and his eye surveying the vast deep on every side.

Among the *Crustacea*, were the *Crab*, *Sea-spider*, *Shrimp*, *Prawn*, *Wharf-louse*, *Beach*, and *Sea-fleas*, *Sea-goat* and *Barnacles*. In the order of *Worms*, the *Tube-worm*, *Sand-tape*, &c., and in the *Polypi*, were the *Animal Moss* and the *Sea Anemone*. The latter seems to be the connecting link between animal and vegetable life; for although appearing like the under side of a toad-stool, it moves from place to place, and upon placing a piece of raw beef or a fly near it, will close its delicate fibres upon, and consume it. Some of the animals secrete themselves during the day, and only come forth to seek their prey in the night. Others, such as the *Sea-lion*, cover themselves in the sand, leaving only their glistening eyes in sight, and pounce upon their unsuspecting victims. In this deep ocean-life the observer can see all the jealousies, rivalries, and contentions so common in the higher order of animal life upon the surface of the earth. Here we have, in miniature, some of the wonderful operations of the great sea, and find opened to our eyes a new world of animal and vegetable life, all expressing with new force the wisdom and power of Him who made them all.

The water with which the tank is filled is never changed; the sea plants and animals mutually supporting each other by their exhalations; as the plant respiration consists in giving out oxygen and absorbing carbon, and animal respiration is exactly the reverse. The sea weeds are covered with numerous little bubbles looking like silver drops which are filled with oxygen gas. These supply the air in the water with that life-giving element, while the animals themselves give out carbon for the plants.

I must leave for another letter my visit to the Botanical Gardens, to the Indian delegations, public buildings, &c., and am,

Truly yours, SIMON BROWN.

Joel Nourse, Esq., Boston.

PERSEVERE.

I'd not give up!—no! grim despair
Should never forge a chain for me,
Whilst thus I breathed my native air,
Within a land of liberty!
No! dastard were that soul that cowers,
Within a free-born land like ours.

I'd not give up! though every frown
That Fortune's face is wont to wear,
Should rob me of the small renown
That may have been my humble share—
Should thwart my every wish and will—
Fortune, through all, I'd woo thee still!

Shame on the weak and craven heart
That bows beneath each transient sorrow,
Without the nerve to pluck the dart,
And greet the sunrise of the morrow!
Without the will—for will is power—
To pluck the thorn, and cull the flower!

For what, to man, is manhood given?
For what his varied powers of mind?
For what his every hope of Heaven,
When earth's fair gifts have been resigned,
If not to brave misfortune's thrall,
And rise superior to them all?

Then raise that drooping brow of thine;
Resolve—and then *endeavor!*
Give sorrow to the laughing wind,
With fear and doubt, forever!
Pass onward, and despond no more—
Thy motto be, "*Excelsior!*"

FAMOUS ENGLISH OAKS.—*The King Oak*, Windsor Forest, is more than 1,000 years old, quite hollow. Professor Burnet, who once lunched inside this tree, said it was capable of accommodating ten or twelve persons comfortably at a dinner sitting.

The Beggar's Oak, in Bagshot Park, is 20 feet in girth, five feet from the ground; the branches extend from the tree 48 feet in every direction.

The Wallace Oak, at Ellerslie, near where Wallace was born, is 21 feet in circumference. It is 67 feet high, and its branches extend 45 feet east, 36 west, 30 south and 25 north. Wallace and 300 of his men are said to have hid themselves from the English, among the branches of this tree, which was then in full leaf.—*Downing's Landscape Gard.*

For the New England Farmer.

EXTIRPATION OF WEEDS.

MR. EDITOR:—Can not you or some of your numerous correspondents suggest some method for the extirpation of the numerous kinds of weeds, that are growing so luxuriantly over our fields, and by the sides of our fences and highways, and increasing every year? Would not it be a good plan for the Legislature of each State to interpose its authority for the destruction of weeds? At least, it is to be hoped that so useful a measure on an extensive scale, will yet be passed into a law. By some it is recommended that the destruction of weeds on the sides of roads should be done at the expense of the town; others, by the road-surveyors, and the expense to be stated in their accounts.

The prevention of the growth of weeds requires many precautions on the part of the farmer. There is great risk of carrying a nuisance to his fields, if he use unfermented manure, and great care should be taken, when grain is cleaned, that none of the offal, which contains the seeds of weeds, find its way to the manure pile. Grain for seed should be well cleaned before it is sown, and attentive farmers, will never purchase any seed but those of the cleanest and best sorts. Many fields, after being completely cultivated and sown with grass seed, have been found when re-plowed, after many years, to be stored with weeds of various sorts, most probably from some unfortunate mixture with the seed sown or deposited with the manure.

All plants which grow naturally among a crop that has been sown or planted, may be regarded as *weeds*, or, in other words, as enemies to the crop that is cultivated. The destruction of such plants, therefore, must be considered as one of the most important branches of the agricultural art; for if that is neglected, or even but slovenly performed, the crops may be greatly reduced, even on the best of soil. Besides, it merits consideration, that if weeds are suffered to exist, the full advantages of manuring land, and other improvements, can only partially be obtained. Nor is this all; the mixture of weeds prevents the crops from receiving the beneficial effects from the atmosphere, sucks up that moisture so essential for the growth of the crop, and the seeds of these weeds injure the quality of the grain. Notwithstanding all these injuries, how many are there who ever attempt to remove weeds in an effectual manner? This negligence is the more to be blamed, because, were farmers at the trouble of collecting all sorts of weeds, before they have formed their seeds, and mixing them with muck or almost any kind of earth and lime in its caustic state, or fermenting them with manure, they would soon be reduced to a soft pulpy state, and in this way, a pernicious nuisance might be converted into a valuable manure.

Various experiments have been tried to ascertain the positive advantage derived from weeding crops. The following is an example tried with wheat. Two acres of good soil was plowed and sown broad-cast. One acre was carefully measured off, and not a weed was pulled out of it—the other acre was weeded with care. The unweeded acre produced eighteen bushels of wheat, the weeded acre *twenty-two and one-half*—that is, one-fourth more in favor of weeding. The importance of weeding, both to the individual and to the public, is such that it ought to be enforced by law. At any rate, a law for fining those who harbor weeds, the seeds of which may be blown into their neighbors' ground, can have no injustice in principle. The justice, or some other town officer, might be authorized by law to issue an order, when complaint is made, for the immediate removal of such nuisances, and if not complied with, the offender should be fined a sum not exceeding $25, one-half to the informer, and the rest to the town or why not for the support of an agricultural society? I think, on the whole, keeping his land free from weeds ought to be a principal object with every farmer; and if this is not carefully attended to, I can assure him that he will pay dearly for his neglect. But the loss which he sustains does not remedy the injury which the public suffers from his slovenly conduct. These suggestions, concerning the regulations with regard to the extirpation of weeds, may be considered as both expedient and necessary, for were they adopted, it is evident, that many of the evils alluded to would be removed, and the wealth and agricultural resources of the nation materially increased. J. J.

Barnet, Vt., Dec., 1857.

SUDDEN APPEARANCE OF PARTICULAR SPECIES OF ANIMALS AND PLANTS.

The sudden appearance during some particular season, of immense numbers of a previously scarce, or even common species of insect, or plant, has arrested the attention of observers in all ages, and has been the basis of much sage reasoning in regard to the spontaneous-generation hypothesis. But at the present day, such vagaries have been entirely dissipated by the light of science.

When we consider that all these lower forms are extremely productive, and that many of their germs can remain for a long period inert, until favorable circumstances call their dormant powers into activity, there needs but a slight amount of reflection, to understand that as far as plants are concerned, a favorable season for the ripening of seed, succeeded by conditions equally favorable to germination, will, in soil adapted to its growth, have the effect of producing the greatest number of that particular plant exposed to such influences. But the conditions which will prove so very favorable to one plant, will, in all likelihood, be only moderately beneficial, or may be even positively injurious to other plants, even when closely related to the one benefited. Add to a favorable season an exemption from the attacks of insects, or other animals, and all the conditions of success are complete, and a large crop is the result. But this favorable season is generally followed by unfavorable conditions. Its insect enemies increase in proportion to their facilities for obtaining food, and the consequence is, that the plant becomes again scarce. Last year, the white clover was unusually abundant; every meadow and common was white with its blossoms. This season, the dandelion, *(Dentis-Leonis Taraxacum,)* is equally plenty. We have observed that these plants are most numerous in the vicinity of places where this species bloomed

last season, although their winged seeds will float in the air great distances; and plants are to be found during one season where none could be found the preceding. Seeds will also lie dormant in the soil for many years—sometimes at very small distances from the surface—until peculiarly favorable circumstance call their dormant vital energies into activity.

Insects, of species injurious to vegetation, appear to be governed by analogous laws. Occasionally, for one season, a moth, butterfly, beetle, or other insect, is to be seen in countless numbers, and almost entirely disappears the next.—Sometimes a species becomes gradually abundant, and then in a few years is equally scarce. The rose bug, *(Macrodactylus subsyinosa,)* is a good example of this; and we hope that the wheat fly, *(Cecidomyia tritici,)* may, at no distant day, follow the preceding species in its decrease. This great increase does not depend entirely upon the presence of a large amount of food, nor the decrease upon the absence of sufficient aliment, for the food of the rose bug was as plentiful in 1856 as it was in 1853; but a certain amount of heat and moisture, with a greater or less prevalence of insects that make such species their food, along with the thinning out by birds and other animals, exerts a very great influence. Other causes exist, in all probability, as yet unknown to us, that exert a controling power over the increase and decrease of animals and plants, and these present a wide field for investigation by the philosopher and student of nature. All discoveries of this kind are really beneficial to man, often putting into his hands the power of prevention or multiplication of forms injurious or otherwise to his interests.—*Ohio Farmer.*

LEGISLATIVE AGRICULTURAL MEETING.

The first Legislative Agricultural meeting of the present season was held on Tuesday evening in the hall of the House of Representatives, in this city. We are indebted to the *Journal* for the following report of its proceedings:

About fifty persons were present. The meeting was called to order by Hon. Mr. FELTON, Senator from Worcester county, who called for a nomination of officers to act at the future meetings.

W. J. BUCKMINSTER, of the *Ploughman*, and Mr. BENNETT, of Leominster, were appointed to act as Secretaries, and the following gentlemen to serve as the Executive committee.

Amasa Walker, of North Brookfield, C. L. Flint, Secretary of the Board of Agriculture, Mr. Bushnell, of Templeton, Mr. Morrill, of Fall River, and Mr. Felton, of Brookfield.

Mr. FELTON then stated that His Excellency, Governor BANKS, who was present, had consented to preside at this meeting, and would now take the Chair.

In assuming the chair, Gov. BANKS said he did so without a perfect acquaintance with the business of the evening. He understood that this was initiatory of a series of meetings to be held during the session of the Legislature, to consider the highly important subject of agriculture in its local and national aspects. The contingency of actually standing in need of the staff of life by any considerable portion of our people, had only within a short time been admitted. But the experience of the past year showed that there had been a more general disregard of agriculture than was well for our country and people. It showed that speculative pursuits do not afford the surest means of industrial prosperity; that every innovation was not an improvement, and the original calling of man was the nearest allied to the prosperity and happiness of the people.

In conclusion, Gov. Banks said he doubted not that the proposed series of meetings would prove advantageous to those participating in them, and to the Commonwealth. He pledged his personal aid to this end.

Mr. FLINT, the Secretary of the Board of Agriculture, being called on to suggest some topic to engage the attention of the present meeting suggested: "The duty and importance of the General Government to encourage and develop the agricultural and industrial resources of the country." Mr. Flint alluded to appropriations which had been made by this and several European governments for this purpose.

Mr. BROOKS, of Princeton, being invited to give his views with reference to the subject suggested by Mr. Flint, said he knew no better way of disposing of a portion of the national domain, than in appropriating it to the encouragement of agriculture in the way of premiums, awards, &c.

Mr. TEMPLE, of Framingham, thought it would be wise for the State to select each year some half dozen localities in the State, and offer premiums for the cultivation of particular crops in particular places.

Mr. TOWER, of Lanesboro', said that farmers needed more educated men to lead them into the field of agriculture as a matter of science. The barrenness of our State presented an admirable field for experiment.

Mr. BROOKS, of Princeton, granted that our land was poor; but we could make more from an acre of it than could be made from the same amount in Illinois. This was true with respect to the corn crop, on which we make five dollars more to the acre than the Illinoisans. Our superior markets rendered Massachusetts farmers able to make more, also, in the raising of pork. In short, the speaker could make more at farming in Massachusetts than in Illinois.

Dr. DURFEE, of Fall River, advocated horticulture as an elementary process to awaken an interest in the minds of the young. There was no State in the Union which had carried this branch to the same extent of perfection as Massachusetts. The speaker agreed with Mr. Brooks in his estimate of the fertility of Massachusetts soil. Even Nantucket, if properly cultivated, was no exception. Some of the very best lands of our State were yet untouched, and those stumpy and stony sections were the very lands for Massachusetts farmers to take hold of. The speaker himself had redeemed an acre of land that was formerly supposed to be incapable of supporting a goat.

Hon. Mr. NEWELL spoke of the need of increased knowledge on the part of farmers, and of the proper time to cut the Chinese Sugar Cane so as to secure the greatest amount of saccharine matter.

Mr. HOWARD, of the *Cultivator*, believed that the conducting of experiments, in a proper manner, was one of the best means by which agriculture could be aided.

Remarks were also made by Mr. BUSHNELL, of Templeton, and Mr. BUCKMINSTER.

Mr. FELTON, from the Executive Committee, said that the subject of discussion at the next meeting would be, "New Plants, especially the Chinese Sugar Cane," and that Hon. M. P. WILDER would preside.

At 9 o'clock the meeting adjourned.

For the New England Farmer.

APPLICATION OF GUANO.

A query has often been made whether the beneficial effect of this stimulating fertilizer, is perceptible for more than one, or at most two years. So far as I have witnessed, I think no benefit is perceptible after the second year—and very little after the first year. The effect of guano on the soil is well illustrated by that of strong drink or intoxicating liquor on the person—apparent for a short time only. Not so with well-rotted manure from the barn-yard or pig-pen. This will show itself for half a dozen successive years. My attention to this point was called by the perusal of the well conducted experiments of Gov. Cushman, published in the *Massachusetts Ploughman* of this morning. In one part of his statement he says, no benefit from the guano used was perceptible the second year. In another he leaves the impression that benefit was perceptible after a lapse of four years. Perhaps this modification may arise from the crops to which it was applied. I think Mr. C. was not quite so clear on this point as he usually is. I wish more gentlemen of his stamp would direct their attention to improving the culture of the soil instead of foundering in the quagmires of party politics; by so doing, the community would be greatly benefited. It is by no means certain that guano is worth purchasing, to be applied to our fields, when other varieties of fertilizers are possible to be obtained. My own impression is, that dressings for our fields can be made from the droppings and liquids of the stall, composted with mud from the swamps—at less expense and of more enduring quality than any guano or phosphate that can be procured. ESSEX.

January 16, 1858.

INHALATION.—Dr. Eliotson, a leading English practitioner, having a full acquaintance with all that had been done by inhalation, and after making thorough trial himself, expresses this view. He says: "We sometimes lessen the irritation by making the patient inhale the vapor of various drugs. The agents which have been chiefly tried are, first, a minute quantity of iodine mixed with hydriodate of potassa; and secondly, chlorine. I have seen more mitigation with the chlorine than the iodine, but have never seen a case of phthisis cured by these means, and don't believe a case ever was cured."

For the New England Farmer.

GOLDEN FLESH PUMPKIN.

MR. EDITOR:—About a year ago, I received from the Patent Office, through the kindness of Mr. Sabin, our member of Congress, a paper of seeds of the "Golden Flesh Pumpkin," the seeds coming thereunto from France, as alleged on the paper in which the four seeds were contained. I planted them in my garden alongside of my squashes, making two hills; all the seeds germinated and grew very thrifty for a few days, then the "large black squash bug" ate them all down to the ground except one, on which they left one leaf, before I commenced putting on to my vines a decoction made of hen-manure and water. This application drove the bugs rapidly out of the garden. This one plant commenced a thrifty growth, taking new root at every joint, by which I mean that a new root penetrated the earth wherever a new leaf was formed on the vine, to the depth of from four to six inches, which root was full of small fibrous branches; in short, it is a very hardy grower. It raised for me, on a little more than one rod of ground, five pumpkins of the following weight: 1st, 158 lbs., on exhibition at the Chittenden County Fair, at Burlington, Oct. 5th, 1857; 2d, 127 lbs.; 3d, 123 lbs.; 4th, 112 lbs.; 5th, 90 lbs.; making in the aggregate, 610 lbs. of pumpkin from one rod of ground; this I call "some pumpkins." They are good to eat, made into pies in the ordinary manner of cooking the pumpkin for that purpose. I can't perceive any difference in the taste of them and the common pumpkin. They excited the attention of very many persons while on exhibition at the fair in Burlington, from their extraordinary size, weight and color. They resemble a squash in color, more than a common pumpkin; but their taste settles the question; they are pumpkins, and nothing else.

I have fed them to my cows, enough, at least, to know that they love them equally as well as the other sort, and I think that if a man can raise from 90,000 to 100,000 lbs. of these from one acre of ground without more than ordinary care, and at the same time not impoverish a crop of corn or potatoes, (which can be done,) it is far better than to plant the common variety, and only get from 500 to 600 lbs. of small, green pumpkins. I ought to add, that on the same one rod of ground, and among the pumpkins, I had planted the Webster potato, and that, though small and early, I got therefrom one bushel and a half of potatoes. Herewith I send you some of the pumpkin seed, which I wish you would plant in some nook or corner of your garden next May. Do not let it climb on a fence or bush; pull it off and lay it on the ground, when it will continue taking root according to its nature; but if allowed to climb, the fruit will not come to perfection; it ripens about the middle of October. The seed of them may be had at the agricultural warehouse of Nourse, Mason & Co. next spring, and also of Mr. Doolittle, in Burlington, Vt., as well as with the agricultural warehouses in St. Albans and Middlebury, Vt. A. F. STONE.

Charlotte, Vt., 1857.

REMARKS.—Five seeds came to hand whole, which we intend to plant as requested.

For the New England Farmer.

CROPS AND WEATHER IN MINNESOTA.

MR. EDITOR:—The winter so far has been very mild for this latitude; the weather has been more like autumn than like winter. We have splendid sleighing now, with about six inches of snow. We had our first severe frost the twenty-seventh or twenty-eighth of September. Nearly all the crops were then out of the way of frost.

We raise here the white and yellow dent corn principally, the same as is raised in Ohio, Illinois and Indiana; most of the seed having been brought from those States, and we find no difficulty in its ripening here. I planted my dent corn about the twentieth of May, and I never saw sounder corn than I raised from it; I also planted some eight rowed yellow flint on the fifteenth of June, which got perfectly ripe, and which I cut up before the frost.

I raised last season a small piece of winter wheat from three bushels of seed, which yielded me something over forty bushels of fine plump wheat; it stood on an average from five to six feet in height.

My farm is situated in what is called the big woods, fifty miles south-west from St. Paul, on the Minnesota river. The soil is a rich, black loam, and is from one to three feet deep, and is said to be equal to the best soils of Illinois, by men from that State.

I cannot close this without expressing to you the pleasure I feel in reading the *Farmer;* it has been a constant visitor to me for the last seven years, and I intend it shall continue so as long as I live. C. A. SHERWIN.

Belle Plain, Minnesota, Jan. 17, 1858.

PLOWS, AND PLOWING.

The attention of mechanics, of agricultural and of scientific men, has for several years past been considerably occupied in endeavors to learn whether the operation of plowing cannot be performed in a quicker and cheaper, and at the same time, in a more thorough manner. That attention has been the means of introducing a great variety of plows, of different construction, and of varied capacity for performing the work required of them. Some, after exhausting the means of their patentees, or manufacturers, and taking a large aggregate from farmers who were desirous to avail themselves of every improvement which they thought would prove of practical benefit in their labors, have utterly failed to accomplish the work claimed for them, and are abandoned. Others, possessing some good qualities, while they were deficient in most others which go to make up a perfect plow, have been introduced, and perform their work indifferently, but just well enough to prevent their being rejected and sent off the farm. There is a third class of plows, undoubtedly, which may be made to execute good work, in the hands of skilful workmen, but they are neither so perfect, nor so cheap, as to preclude all hope of devising and constructing another, which shall be cheaper, meet all the practical wants of the farmer better, and more permanently and satisfactorily turn and pulverize his furrows, than any plow now extant.

But we cannot form a correct judgment of a plow, nor of a horse, entirely by their good looks; the latter may have a clear and unblemished-looking eye, but be stone blind, and the former, to an unmathematical critic, may appear to possess all the lines of beauty and utility necessary to perfection in a plow, and yet utterly fail to turn a deep, sufficiently broad, and well-broken furrow.

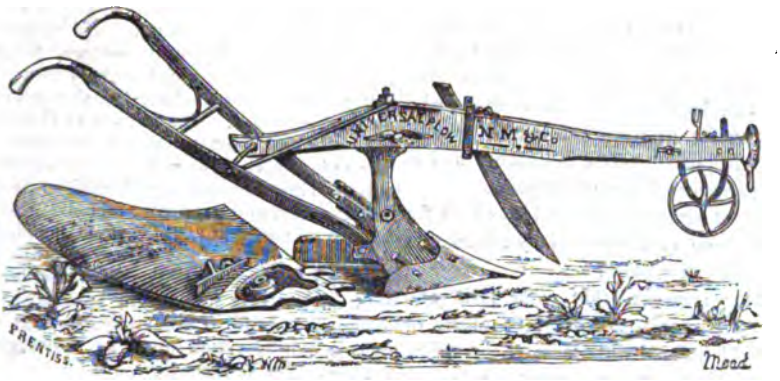
A plow with true proportions, is constructed upon strictly mathematical principles, and this is as necessary to the ease and comfort of the team and prompt despatch of the business, as it is to the execution of the work itself.

The plow being the fundamental implement of agriculture, it has justly received the large share of attention of which we have spoken, and has been the subject of careful consideration by many distinguished minds. For several years, in England, experiments have been made to work it by steam, and they have so far succeeded as to arouse the attention of many leading agriculturists in that country, and to some extent in our own. To be profitable, however, if they are found to work well, we suppose they must be used on extensive lands, and not on freeholds so small as those generally are in New England.

The plows which are represented in the accompanying cuts, possess some peculiarities which are new, and some advantages over all other plows, that have not heretofore been realized. They are the invention of FREDERICK HOLBROOK, Esq., of Brattleboro', Vt., and *have grown gradually out of his own practice in the field,* the only place where a person can consistently decide how a plow should be constructed in order to secure certain desired results. He did not go to work to make a plow, without an accurate knowledge of its importance, and of what is commonly required of such an implement,—but *while plowing, saw the deficiencies of the one in his hands, and corrected them, and so doing again and again, through a series of years, has succeeded in producing "The Universal Plow,"* which is destined, we think, to meet a want of the farmer that has never before been supplied.

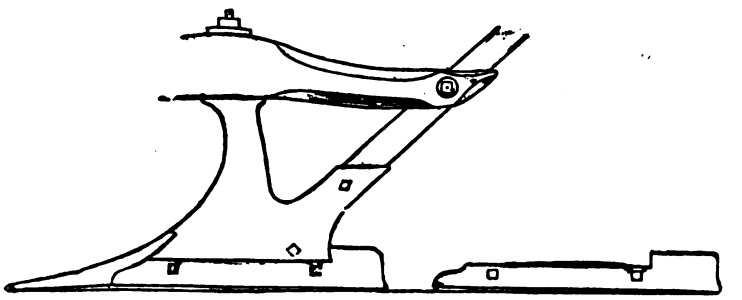
The implement embraces various forms and sizes of mould-board, each nicely fitting one common standard and frame-work—thus adapting the plow to a wide variety of soils and modes of culture. Each mould-board is constructed to perform its respective work in a thorough and finished style.

We introduce on the opposite page two or three forms of the plow, contenting ourselves with



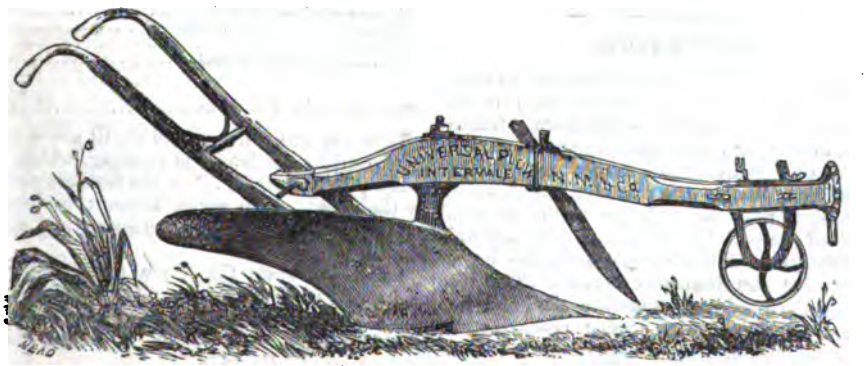
No. 1.—Frame-work of Plow, with Mould-Board detached.

This is a view of the standard, share and frame-work of the *Universal Plow*, with one of the mould-boards lying in the rear. The slots in the standard, just back of the share, receive the locks on the forward end of the mould-board; the button on the mould-board, a little back of and above the locks, enters the socket back of and above the slots in the standard, and a bolt passing through the mould-board and standard at this point, is made fast by a nut on the inner side; another bolt confines the mould-board to the right hand handle of the plow; and thus by means of the two locks and the two bolts the mould-board is held firmly and securely to its place. By loosening the bolts, any mould-board is taken off to give place to any other one of the series. The greatest attainable simplicity has been closely studied in adjusting the parts of this plow, so that the various changes are easily and quickly made.



No. 2.—Outline of Land-side.

This is an outline of the land-side, showing how the sole or shoe piece is attached. It represents a long and short shoe—the former being used with the longest and largest of the Intervale mould-boards, and the latter with the Upland and Stubble. On all plows, the shoe of the land-side is exposed to great friction, and needs renewing long before the mould-board wears away. The shoe is very cheaply renewed on this plow.



No. 3.—Side View of the Plow Rigged.

This is a side view of the plow rigged with one of the Intervale mould-boards, and wheel and cutter, for plowing flat furrows in smooth grass land.

the single remark for the present, that we have delayed speaking of it until we had witnessed its operations, and could speak with some assurance. The plows were tested in various soils, in the presence and in the hands of several as good plowmen as can be found in this country, who all expressed great gratification in the results. This trial we propose to relate in another article with one or two more forms of the plow.

Now, before closing this article, let us look for a moment, at some of the *pecuniary* advantages secured us in this new plow:—

Suppose, for instance, that your farm and modes of culture require *six* different plows, or that you would find advantage in the employment of that variety. Say you want the largest and smallest intervale, medium upland or stony land, medium-lap-furrow, largest stubble, and the sod and subsoil. That would make six plows, and be a fair demonstration of the *economy* of the *Universal Plow* in expense and storage, to say nothing of the quality of work it would do compared with other plows—though in this respect it ranks second it is believed to none. The cost, then, for this one beam and handles and the six mould-boards would be as follows:

Intervale, No. 120, full rigged	$16,00
Mould-board No. 124, light size	1,75
Mould-board, upland, 141, medium	2,50
Lap-furrow, medium $2,00 / Narrow share for do .50	2,50
Mould-board, stubble, 150, large	3,00
Skim plow, to be used with or without stubble, 150	3,00
Total for six plows	$28,75
. hen for bog-meadow, take the wide, steel-edged share extra, to go with large 120 intervale	1,25
	$30,00

These plows, or their equivalent, wooded up separately in the usual way, would cost an average of $10 to $13 each, or in all, $60 to $70! Then, instead of six plows to handle, and find storage for, you have but that one, and the mould-boards, which are so compact as to occupy no valuable room.

STRYCHNINE.

This poison which has of late become so notorious in its abuse, (we cannot say use,) is the most uncertain in its action on the human frame; in some producing instant death; the same dose in others only bringing on tetanic convulsions, and in a lucky few no effect at all; and this does not appear to have any relation to the physical strength of the patient. It is a whitish, crystalline substance, and is extracted from the nut of a tree called strychnos *nux vomica*. This tree grows in Ceylon, is of moderate size, and has thick, shining leaves, with a short, crooked stem. In the fruit season, it is readily recognized by its rich, orange-colored berries, about as large as golden pippins. The rind is smooth and hard, and contains a white pulp, of which many varieties of birds are very fond; within this are flat, round seeds, not an inch in diameter, covered with very beautiful silky hairs, and of an ash grey color. The nut is the deadly poison which was well known, and its medicinal properties well understood by Oriental doctors, long before Europe or America had heard its name. "Dog-killer" and "fish-scale" are translations of two of its Arabic names. The natives of Hindostan often eat it for months, and it becomes a habit, like opium-eating, with the same disastrous results. They commence with taking the eighth of a nut a day, and gradually increase their allowance to an entire nut, which would be about twenty grains. If they eat directly before or after food, no unpleasant effects are produced, but if they neglect this precaution, spasms result. The chemical tests for it are numerous, but only one or two can be relied upon as thoroughly accurate.—*Scientific American.*

For the New England Farmer.

PROFITS OF KEEPING AND RAISING POULTRY.

Many think that an investment in a stock of poultry is rather a poor one. I will, therefore, give an account of the expenses and income of my stock, the past year, (or during the year 1857) as I have kept debt and credit.

I have been accustomed to the keeping of poultry of different species for a number of years, and have never been fully satisfied, until now, that there may be a very handsome profit realized from a stock of poultry, if rightly managed. The variety of my stock comprises the Cochin, Spanish, and Polish hen, the half wild turkey and the Bremen geese. I have kept this kind of geese for a number of years, and prefer them to any other kinds that I know of. Some of their superior properties are that their feathers are purer white, and produce nearly double the quantity of the common kinds; their flesh also being far superior, both in weight and quality. My stock of fowls, January 1, 1857, was as follows:—22 hens, 3 roosters, 3 hen-turkeys, 3 geese, (2 geese and a gander.) I raised 100 chickens, 66 turkeys and 25 goslings from the same.

The amount of capital invested in Fowls	$15,00
" " " for Grain	50,60
	$65,60
The amount of poultry sold	$93,33
The amount made use of in family	6,00
The amount of eggs sold	16,33
The amount of stock on hand	22,00
	$137,66
Balance in favor of the credit	$72,06

In the account there is no credit given for the eggs used by the family in cooking, which would amount to something. Nor the feathers produced by the geese, which would amount to about $6, paying something towards dressing and marketing.

I will just state that I am still keeping debt and credit with my fowls, and my prospects are good. I have now on hand an extra pair of young geese for sale. JOSEPH MACE.

Amherst, N. H., 1858.

REMARKS.—Thank you, sir, these are the facts we all desire to know.

For the New England Farmer.

SPAYING COWS.

MR. EDITOR:—To those who are raising milk, in the vicinity of large towns, it has become a matter of serious inquiry how the various sources of loss, to which they are subject in their business, can be avoided. In very many instances these losses are sufficient to absorb all the profits. These sources of loss, in addition to the diseases to which cows are subject, are chiefly three. 1st, The periodical heats which are natural to cows that are not with calf. It is well known that during these periods the quantity of the milk is diminished and its quality impaired. 2d, The milk of cows with calf, after the fourth month, is deteriorated in quality, and soon begins to diminish in quantity. After the sixth month it is rarely sufficient to pay for the keeping. Many cows become dry soon after the sixth month; and even when they would continue to give milk a few weeks longer, most cows are allowed to go dry after the seventh month, to enable them to bear the draught made upon their constitutional powers by breeding, and to recruit for the subsequent milking. Here, then, is a loss of profit for about one-fourth part of the year. 3d, Many cows lose their calves prematurely. This is a source of loss that seems involved in much mystery. It sometimes exists, apparantly, as an epidemic. A large proportion of the cows in a herd will sometimes be subject to it. It prevails in some seasons more than in others, and sometimes seems to be confined chiefly to certain localities. Sympathy, it is believed, in many instances, has much to do with it. When one cow from any cause has lost her calf, others associated with her will become similarly affected. It has been ascribed to various causes, but the cause or causes are by no means satisfactorily ascertained. In this vicinity it is one of the most serious evils that the milk raisers have to encounter.

One gentleman of my acquaintance has had five cows lose their calves during the past season. Three of them were promising heifers, all of which lost their calves in the pasture. The other two were older, and were kept at home. Another has lost five, and another eight. Many others have lost more or less. Now these cows must be kept another year before coming into milk again. And there must be a loss upon them of at least twenty-five dollars cash, unless they are in a condition to be turned to the butcher. If they are, this is probably the most profitable disposition that can be made of them, for in addition to the cost of keeping them dry nearly a year, they will be more likely to be affected in a similar way again. But it is a disappointment to the milk raiser, who has made his arrangements to obtain his supply of milk from them, and it is often difficult, if not impossible, to supply their places with cows coming in at the time when they are wanted. The farmer who has lost five calves in this way has lost at least $125. Now how can these evils be avoided? Is there any system of management by which they can be prevented?

In some parts of Europe, and especially in the neighborhoods of Paris and Brussels, the milk raisers are adopting the practice of spaying their cows, by which they are enabled to avoid all these sources of loss. They avoid the periodical heats, and the milk remains uniform in quality and quantity through the year. The cows become more quiet and contented, and are more easily kept in good condition. They avoid the loss from the cows going dry one-fourth part of the year, and of course all losses from abortion will be avoided. The most proper time for doing the operation is about six weeks after calving, or as soon as the cow gets well over the effects of calving, and has recovered her strength and vigor, and got weaned from her calf. It is confidently stated that they will continue to give as much milk for two or three and sometimes four years, as they did at the time the operation was performed, and that the milk will be of better quality, and that when they begin to go dry that they will fatten much more easily, and make better beef.

The benefit of this operation will be confined to those who do not raise their cows, but who keep cows for their milk only, as market men and families who keep one or two cows. If the statements which come to us from Europe are true, eight good cows spayed at five or six years old, or when they have reached their full milking age, are worth at least as much as twelve treated in the common way. The operation is easily performed, and we do not learn that it is attended with any special danger. The operation has recently been performed in this town with entire success by a gentleman who is qualified to perform it in a skilful and scientific manner. The subject is worthy the consideration of milk raisers and of families who have a good cow which they would be glad to retain in milk all the year round, and for several successive years.

Concord, Jan. 12, 1858.

For the New England Farmer.

CULTURE OF INDIAN CORN.

MESSRS. EDITORS:—Indian corn is manifestly the most important grain crop raised in New England. Our soil and climate admit of greater improvements in the culture of this crop than any other our fields produce. The corn plant will draw nourishment from almost any kind of manure that can be applied to the soil, and there is very little danger of an excessive application. We can prepare a field for an extraordinary crop of corn, and after that is taken off, the land will be in excellent condition to receive the seed of some other grain or grass. The cultivation of this plant occupies a prominent place in good husbandry. It is a subject of lamentation that it does not command more attention and receive more effectual encouragement. Much less corn is planted, within the circle of the writer's knowledge, now, than thirty years ago. The neglect is painfully felt in a year like this, when it is very difficult to command money to supply the deficiency. Various causes have been in operation to divert attention from the culture of this very useful plant. We think the criticisms on the measurement of corn crops, often made with very little knowledge of the manner in which it is done, and suggestions of the dishonesty of applicants for premiums, have had some influence in the case. In your paper of Dec. 13th, there is mention of a crop of corn raised by the writer

and reported many years ago. "P." says he thought at the time there must have been some "humbugging" in the case; now I suppose this means there was collusion between the supervisor and myself.

Some larger crops have been reported since, against which reports, similar suspicions are expressed. If it be true that the Plymouth County Agricultural Society has always selected unprincipled scamps as their agents, then the censures passed on them may be just; but if the agents have been upright and fair men, their accusers are without excuse. For the rules established by the Society for the measurement of corn are easy to understand, and sufficiently precise and rigid to secure justice among the applicants, and present the public with just views of the experiments.

Some of our reports have been pretty roughly handled by men regarded as holding high rank, as agriculturists; intimations from such men that statements are incredible will soon pass very currently as falsehoods with some of less calibre.

Unless the art of agriculture is to be swallowed up in parade and war, we think the senior editor of the *Ploughman* and the Secretary of the Board of Agriculture may yet live to credit reports of larger crops of corn than they have yet seen. The editor of the *Ploughman*, it is believed, has already relinquished the first opinions expressed by him, that sixty bushels of corn to the acre is an extraordinary crop. No doubt large stories are sometimes told of the amount of crops and products; some years ago, it was said one hundred and seventy bushels of corn had been raised on an acre in the State of New York, and the man expressed belief that he could raise two hundred; all this seems to me less incredible than a statement that four quarts of milk will yield a pound of butter, or that from eighteen to twenty-one pounds of butter per week are made from the milk of a single cow, for a succession of weeks. M. ALLEN.

Pembroke, Mass.

MAINE BOARD OF AGRICULTURE.

We have been favored by the accomplished Secretary of this Board, S. L. GOODALE, Esq., with this neatly printed volume, of more than two hundred pages. It gives evidence of having been prepared with much care and attention, and is in a form to instruct those who carefully examine its pages. They are not made up of loosely drawn reports and extracts, merely to fill a certain space—but seem to be well-digested and continuous, calculated to give a general view of the condition and progress of farm culture throughout the State. This is as the Secretary's report should be—and when it is otherwise, it shows a want of clear comprehension of duty, or a want of ability to perform it. This is the second report of Mr. Secretary Goodale, and it fully sustains the high character of his first report.

In another column a Maine correspondent gives a more lengthened notice and review of the report.

For the New England Farmer.

ABOUT BARNS.

MR. EDITOR:—The following appears in the last issue of your paper:

"I am about to build a barn in addition to two others I now have. I want a cellar for my sheep in winter, and what I wish to know is, can I have stables in an L so as to make it handy, as I do not want the stables in the cellar nor in the barn over the cellar. Any plan or information you or any of your numerous correspondents may give, will be thankfully received by

A SUBSCRIBER."

Upon a New England farm a good barn with a cellar under the whole is as essential as a good house with a cellar under the whole of it. The health and comfort of the domestic animals depend much upon their winter quarters. It is true economy to be liberal to them. A barn should be at least thirty-six feet wide, with twenty feet posts. Forty-two feet wide is a better dimension. The length may be eighty feet, one hundred feet, or longer if needed. Even two hundred feet in length is better than three separate barns. It should have one or more ventilators at the ridge-pole. The cellar should be under the whole of it, the walls should be made of rock pointed with mortar, with brick underpinning two feet high, containing, at suitable distances, small doors eighteen by sixteen inches, for the purpose of light and ventilation. The cellar should be at least eight feet deep, with two rows of brick piers eight feet apart—the whole length of the barn. The entrance to the cellar for teams should be at one end, secured by a tight door. A barn cellar thus made will keep vegetables secure from frost in winter, and will be the proper place to store farming tools, carts, wheels, plows, harrows, &c. In such a cellar any quantity of manure can be made by the mixture of muck, soil, scrapings of streets, leaves and straw, with the solid and liquid manure made by the oxen, cows, sheep and horses housed above. Stables should never be in the cellar, but always above and over it. Hogs may be kept in the cellar to work over the manure. No farmer should forget that his success depends upon the amount of manure he shall annually manufacture. His *fancy fertilizers* should be manufactured by himself, in the cellar of his barn. He should have an under-ground drain from the house to the barn cellar, in which all the soap-suds, washings of the sink and chamber water should be conveyed to the manure heap. In this way neatness about the house and purity of air is preserved.

Sheep should never be wintered in the cellar of a barn. The dampness is injurious to its health. That animal has a natural protection against the cold, and does best in a dry, rather than a warm place.

The interior of a barn may be arranged to suit the fancy, but several things are essential. That the stables be over the cellar. That the arrangement be such that the heads of the cattle be towards the open space, or barn floor, and that a convenient trap-door be had in the barn floor, through which to tip a cart-load of muck at a time. PINE HILL.

January, 1858.

EXTRACTS AND REPLIES.

GAS TAR.

I would like to inquire if there is any virtue, for agricultural purposes, in the substance called *gas tar*, obtained at the gas works, and if so, how it should be applied?

CHARLES A. THEOBALD.

Dresden, Me., 1858.

REMARKS.—We find in the "American Muck Book" the following account of the substance:—"*Gas tar* or *coal tar*, from the amount of ammonia it contains, like all other matter in which ammonia is present, must be rich as a manure, whether diluted with water and applied in a liquid form, or as composted with peat or other absorbent matter.

"As this substance is produced in rather limited quantities, and employed very commonly as a paint for posts, fences, farm buildings, &c., it has not been much used as a fertilizer on account of the expense attending its purchase; but wherever it can be obtained at a small cost, it is an article well worthy of the farmer's notice. It is composed entirely of ingredients which enter into the composition of all plants, is gradually decomposed in the soil, and is powerful in its effects; hence, it is preferable to apply it in a compost made of pulverized peat, swamp or pond muck, loam, mould, or any of the absorbents treated of in other parts of this work. It may be applied as a top-dressing for most kinds of crops of grass, turnips or grain; or it may be employed in the hills or drills of most of our garden vegetables, Indian corn and other hoed crops."

—

HOW TO MAKE AN EXCELLENT CAKE.

One quart of Indian meal, four table-spoonfuls rye meal or flour, half tea cup West India molasses, one tea-spoonful of saleratus, and some salt; stir in warm or cold water till it is nearly as thin as fritters or pancakes. Sweet or sour milk or buttermilk may be used, allowing more saleratus for the sour. Pour it into a tin or iron baking-pan, well greased, and bake in a quick oven.

It is good enough without any spice, but if you are fastidious, and can afford it, you can add caraway seed, allspice or ginger. It is best when first baked, but is good afterwards, cold or steamed. When crumbled in milk, it is particularly relished by children. Try it.

If you should happen to get in too much or not enough saleratus, you can govern yourself accordingly next time.

P. D. & T. S. EDMONDS.

East Chelmsford, Mass., 1858.

—

WHAT CAUSED IT.

I have noticed within a few days, that a thrifty Porter apple tree, about a foot in circumference, has a large crack in its trunk beginning in the crotch and extending through the bark and wood nearly to the ground. I find similar cracks, but none so large, in the trunks of two other trees; the cracks in appearance very are like those produced sometimes in a log, by boring a hole in it, pouring in water and letting it freeze. Some parts of the crevice in the Porter tree were filled with a discolored icicle the morning after a freezing night. The trees stand on a yellow loam of about a foot in depth; the subsoil is a coarse, porous gravel, perhaps with clay underneath, for water is reached by digging six to eight feet.

Jan. 20, 1858. D.

REMARKS.—We have noticed this in our own trees, but always found it in young and thrifty growing ones. Many persons say it is caused by cold. Is it not rather owing to an excessive supply of sap, unable to find an outlet through the natural channel of stems and leaves, and thus swelling the trunk until it is distended to bursting?

—

SUBSOILING WET SOILS.

Is subsoil plowing beneficial on a naturally wet granitic soil? J.

REMARKS.—Certainly, we think. If any naturally wet soil is made porous and light six or eight inches lower than usual, it would allow the water to pass away from the upper portion more readily, and consequently let in the air and heat, and thus materially improve the mechanical condition of the surface soil. Roots of plants would also extend themselves deeper than if the substratum had not been disturbed.

But such soils should first be drained, if possible; then the process of subsoiling will afford ample returns for all its cost.

—

WASH FOR FRUIT TREES.

Make a firm soap of one part lamp oil (no matter how much candied) and six or eight parts of strong ley or potash solution; one part of this soap and eight of warm water—apply with a brush, or cloth attached to a long handle.

I have used this wash with perfect success on young trees, entirely destroying the aphis when the trees were nearly covered with them, and giving to the bark a healthy and vigorous appearance. Apply the wash in February or March.

J.

—

PUMPKINS AMONG CORN.

Will you, or some of your correspondents, give your views of raising pumpkins with corn, as this is a subject I have never seen discussed in your paper? OLD SUBSCRIBER.

Putney, Vt., Jan., 1858.

REMARKS.—It is a common custom in New England to raise pumpkins among corn. It used to be our practice, but we have nearly abandoned it. Whether it is best to cultivate mixed crops of corn and pumpkins, or not, we, certainly, are not able to determine,—but are strongly of the opinion that no gain is made by the introduction of the pumpkin into the cornfield. What do other cultivators think?

PORTABLE GRAIN MILLS.

What kind of portable mill do you consider the best for grinding all kinds of grain for farmers' use, and what is the price?

Chaplin, Jan., 1858. J. S. Ross.

REMARKS.—In the December number of the monthly *Farmer*, p. 574, may be found some remarks on this subject. The price of mills varies from $35 to $65.

ARE GOATS PROFITABLE?

I wish to inquire about goats, whether they are profitable to keep for their milk?

Paxton, 1858. A SUBSCRIBER.

REMARKS.—It depends entirely upon circumstances, whether it is profitable to keep goats for their milk. If the keeping a cow is absolutely precluded, and milk cannot readily be obtained in any other way, it would probably be profitable to keep goats for their milk. It is sweet, nutritive and medicinal, and less apt to curdle on the stomach than that of the cow. When yielding milk a good goat will give, for several months, at the average of two quarts a day. Mr. Pringle, of Kent, England, in an article in the *Gardener's Magazine*, says that two goats are equal to one small Shetland cow. The flesh of the goat is strong and indigestible, and is rarely eaten.

A BIG EGG AND QUEER EGG.

I send you a description of a hen's egg that was recently presented to me by Mrs. Monroe, of Burlington; it is a great natural curiosity; it measures in circumference within a fraction of eight inches one way and nine inches the other, and it has inside another egg, with hard shell, perfect in appearance, and about the size of a common hen's egg. PETER WAIT.

Danvers, 1858.

WHEN TO FEED MILK COWS.

I wish to know through the *Farmer* at what time cows should be milked to yield the greatest amount? Whether before they are fed, or during the time of feeding (in winter,) or how long after they have fed to the full? P. F.

East Charlemont, 1857.

HOW TO RAISE POP CORN.

In answer to your correspondent who inquires about raising pop corn, I would say that there is no mystery about it; the culture is the same as for any other corn; the difficulty is in the kind of soil on which it is raised; that raised on light, warm, sandy soil, being very much the best, while that raised on strong, rich land, is almost worthless for popping. B. F. CUTTER.

Pelham, N. H., 1858.

PURE BLACK POLAND FOWLS.

"An Old Subscriber," who inquired some time since where he could find these fowls, is informed that he can procure them of Mr. JAMES M. CHATTERTON, at Centre Rutland, Vt.

For the New England Farmer.

THOROUGH DRAINAGE AND IRRIGATION.

In the first volume of the monthly *New England Farmer*, page 74, may be found the following history and definition of the term Thorough Draining, credited to ROBERT JARDINE:

"Draining, as understood thirty years ago in England, meant merely the making of channels to carry off surface water, and underground drains to dry bogs, or cut off springs. It has now *an entirely different meaning* in the agricultural world. Mr. Smith, of Deanston, near Edinburgh, was among the first to practice and explain Thorough Draining, as it is called. His system is, that *all* land requires to be drained; that *the depth of loam, or soil, containing the food of plants, seldom exceeds a few inches, resting on a subsoil, or pan of clay, or hard gravel, saturated with water.* By making drains from two and a half to five feet in depth, at every twenty or thirty feet, the land becomes dry, air takes the place of water," &c., &c.

Portions of this extract to which I direct the attention of the advocates of Thorough Draining in this country are put in italics.

Here we have the English idea of soil and subsoil. Add to this the humidity of the English climate, and the necessity of the herculean task of making drains "from two and a half to five feet in depth, at every twenty or thirty feet," all over the farm, and the necessity, too, of the enormously thick and heavy hob-nailed shoes which are worn by English laborers, are natural inferences.

But must the English practice of Thorough Draining and hob-nail shoes be followed in the United States? Is draining with tiles "the next great step to be taken in the march of improvement on all our old farms" in New England? Will any one who ever did so much at farming as to dig a hole in the ground in this country, adopt the language of Mr. Smith, which I have put in italic letters, when he draws up a description of the soil and the subsoil through which he penetrated? Or will he infer from the dry sand and the loose gravel which here generally lies from five to fifty feet over any thing "saturated with water," that the American farmer must expend twice the value of his farm to rid himself of the "surplus fluid?" May he not rather adopt the language used by Prof. Nash, in his address before the Hampden Society, in 1854, and say: "The Almighty has done this work so well that the owners need expend nothing with the hope of doing it better?"

The difference between the moisture of both air and soil in this country and England is admitted to be great. An English laborer of my acquaintance, after making his "pile" in this country, returned home with the intention of spending his days with the friends and amid the scenes of his boyhood. In a short time, however, he was back again and at his old tasks in New England. He said that he found he could not stand the climate there. The ground was so damp that it seemed to strike through his shoes as soon as he stepped ashore, and gave him the rheumatism, so that he was sick and lame all the time he was at home.

Prof. Nash, in the address from which I have already quoted, says: "Soils there, from the most clayey, up through the various loams, to the most sandy, are more compact than those which bear the same name among us." There vegetation flourishes best on raised beds, huge hills, or sharp ridges, and the farmer is compelled to guard at every point against the effects of a superabundance of water, as he is taught by experience that moisture is his great enemy.

In this country, as a general rule, it is drought, not moisture, that injures our crops. We know more of the evils of digging from fifty to one hundred feet to find water enough to fill our teakettles, than we do of those which attend a 'subsoil of clay, or hard gravel, saturated with water,' but a few inches from the surface. England, therefore, may have too much moisture; we often have too little. The roots of her vegetables may die of dropsy; ours perish by drought. In her heavy soils, manures may waterlog and sink beyond the reach of plants; on our sandy plains and under our tropical sun, they probably "vanish into air." English farms may perhaps need draining; American farms need irrigation.

Our climate and our soil are so materially different from those of England, that we must regard it as a misfortune that our theoretical agriculture comes to us directly from that country. This fact goes far to account for the often lamented unpopularity of book-farming, among us. A large proportion of the volumes in our rapidly increasing agricultural libraries, though published in America, are "founded on" English "facts," if not mere re-prints of books written for the fast-anchored and fog-steeped Isle, where turnips grow, and corn does not.

Whether we read the history, or study the monuments of agricultural industry, of those European countries whose soil and climate is most like our own, we learn that turning water upon the soil, instead of drawing it out, has ever been regarded as the proper way to increase the fertility of the land.

In another article I propose to give some reasons for my opinion that, in the United States, there are twenty acres that would be benefited by irrigation, where there is one that needs draining. S. P.

Winchester, Jan., 1858.

BARLEY.

It is stated that the first barley sown in this country, was upon the island of Martha's Vineyard, in 1602, by a man named Gosnold, who introduced this and other varieties of grain from England into Massachusetts. In 1811, barley was sown as a crop in Virginia, and continued to be cultivated there until the settlers found tobacco more remunerative. In 1626, barley was one of the crops grown upon the farms of Manhattan Island—probably where Trinity Church now stands. In 1849, the barley crop of the United States was 5,167,000 bushels; and according to the increase of the preceding decade, the crop of 1856 would be over seven millions of bushels. It probably even exceeded this. The grain is nearly all consumed in the States where it is grown, principally, we presume, for malting, as the price is too high for feeding to stock.

TREES AND THEIR USES.

The value of the forest tree is beginning to be appreciated not only in a physical but economical point of view, and each new treatise serving to show the necessity which exists for preserving and cultivating trees, is to be welcomed as a contribution to the public weal. An article on this subject in the July number of the *North American Review*, is calculated to disseminate much wholesome truth bearing on the subject. Already the rapid destruction of the forest has been in a measure arrested, partly in consideration of the prospective wants of the railroad and shipbuilder, and the process of restoration has been commenced by re-planting many acres with young trees. After speaking of trees as an ornament, and the many classic memories which they serve to perpetuate, as the "rugged yew-trees" where Gray lies buried, to "Milton's mulberry," and the "Avon willows," the reviewer speaks of trees as productive property, as follows:

"It can be demonstrated that the best use for the larger part of the cleared land of New England would be to plant forests upon it. There is, except in the rich gardens close around the cities, no land so profitable, no land which pays so good an interest on its cost, as wood land. In some parts of Massachusetts a man who owns a hundred acres of pasture is little better than a bankrupt, while he who owns a hundred acres of forest is independently rich. The first must pay taxes on what does not pay for its culture, while the second can cut off enough to meet the annual interest, yet have more at the end than at the beginning. We once heard an eccentric genius maintain that his woodland, about fifty acres in all, though he had bought it and paid for it a good round sum, some thirty years before, had in reality never cost him a cent; 'for,' said he, 'I have cut off wood enough to pay not only the original outlay, but to meet all the worth of the money at compound interest, and to cover all charges, and now I have more wood than I found there at the beginning.' It was rational logic enough.

We are confident that, at the present prices of timber and fuel, the profits of wood-land to our New England farmers are at least three times as great as the profits of the land which they cultivate with so much labor. The experiment of planting locusts on Long Island has proved that lands before considered valueless, may become the most precious possession of their owners. Thousands of acres now lying waste might, with a very small outlay, be made to yield very great returns. The length of time that must pass before the profit of these artificial forests can be tested, undoubtedly deters many from planting them. Very few men like to make an investment of which the returns begin to come only after twenty or thirty years. But every man knows that whatever raises the value of his land is as sure profit as that which actually puts cash into his pocket. There seems to be less promise in an acre of young locusts than in an acre of thriving turnips; but in twenty years the value of all the annual turnips will not begin to reach the value of the trees. The longer the planter is willing to wait, the greater will be his ratio of gain."

It is recommended that on every farm of respectable size there should be a season for the annual

planting of trees. Unlike other crops, they enrich rather than impoverish the soil. Moreover, trees preserve the snow, (the "poor man's manure,") and by breaking the wind, secure a more even covering of snow to the ground. The sudden alternations of freshet and drought are also prevented.

The French government, which has done more than any other in the culture of forests, rather favors this theory, and encourages the separation of kinds, where large returns are expected. In the Department of Landes it has chiefly replanted *pines;* on the slopes of the Pyrennes the *box* is the favorite variety; while in Brittany and Normandy the *linden* abounds. In Scotland the *larch* has been most extensively cultivated; and more than ten thousand acres, with more than fourteen millions of trees, were planted in less than a century, by the single family of Athol. This example has been copied in other parts of Europe, and one is often surprised to find in secluded places, like the region of the Tegernsee, in Southern Bavaria, beautiful artificial forests of larches. In Greece the prepossession seems to have been for plane-trees, and on the hills of Laconia a recent traveller, M. About, has remarked the wanton and wasteful destruction of these noble monuments of the Turkish dominion.

The writer says, "If the rate of disappearance goes on for the next half-century as it has for the last, the child is now living who will see the soil of New England everywhere as bare as the soil of Attica, and its noble rivers shrunken in summer, like Achelous and Cephissous, to shallow brooks."

For the New England Farmer.

POSITION OF APPLE TREES.

MR. EDITOR:—Your suggestions on this topic, as to setting trees by the stone wall, by the borders of the field and by the road-sides, accord entirely with my early lessons. I was born and reared on a farm, where several hundred barrels of cider were made annually, and where the profits of the cider-mill was esteemed better than any four cows kept on the farm. In those days, no one was ashamed to make or drink a little good cider. My father reared on his farm four boys and two girls; the average height of the boys was more than six feet—the average weight of the whole was more than 200 lbs. each; so that we lost very little of the growth that was our due, by the cider that was made on the farm. True, for several years past, I have made very little use of cider; but my father continued to use it, until the day of his death, and apparently with a good relish. For more than eighty years, he was favored with a sound mind in a sound body, and this is enough for any one.

He was of the opinion that one tree, properly placed by the wall or by a large rock in a hollow, was worth half a dozen trees in a row on an open plain. I remember we used to gather the major part of our fruit from such isolated trees; and the fruit they will yield is the chief object for which trees are grown.

January 16, 1858.

THE FIRST APPLE IN NEBRASKA.—Judge J. W. Hall, of this county, has presented us with an apple grown on his farm, five miles north-west from this city. This is the first apple grown in Nemaha county, and for aught we know, in the Territory. It is a beautiful specimen both in appearance and taste; a bright yellow, medium size, and slightly sweet, rich and juicy; was grown upon a tree planted one year ago the past spring. The early production of this tree is evidence of the adaptation of the Nebraska soil to the growth of fruit.—*Ohio Cultivator.*

For the New England Farmer.

MANAGEMENT OF COLTS.

MR. EDITOR:—There is in the December number of your much esteemed journal, an inquiry upon the above subject, by Mr. Gray, followed by your reference of the question to Mr. Vining. His reply I have waited for, and read with interest. I consider it in the main excellent, and the right thing to follow. The one exception that I take is in the matter of grain. I have changed my course in this, within the last ten years. After observing that colts grained during winter, do not thrive so well in the summer—after having one of the best colts I ever owned nearly ruined, by contraction of the fore feet and enlargement of the ankles, gradually brought on, as I could not doubt, by constant, though small allowance of grain, and increased, probably, by being kept a part of the time on a floor—I have dispensed with grain, and feed only with good hay, (early cut, well cured clover is good,) and give once or twice a week a mess of roots, or even apples, for a change, and to keep up the appetite. A colt should not be kept tied, nor should he be blanketed. His stable should be warm enough without. A yard for exercise, as Mr. V. says, is very important. Let there be in it a good supply of water, but no ice for him to slip on, and no sharp points in the fence to injure him, and let him be secured from all cold storms. I have had better results from this than the former course. In this way I raised the mare now owned by Adna Storrs, of Hanover, N. H., which took the first premium at the New Hampshire State fair, at Concord, last fall, as a brood mare, and also the first at the Connecticut River Valley fair, held last October, at Bradford, Vt., in the class of Gifford Morgans.

It seems to me reasonable that a horse kept without grain till the age he is put to service, should have a better constitution; that the owner will then be free to adapt the quality of feed to the severity of labor. Horses, when not at work, should be capable of keeping good flesh, and a smooth coat, without grain. So kept, they will be more healthy, and last longer. This cannot well be done with those that have always depended upon having it. I said a colt should not be tied. Now let me digress a little, and say that a horse kept up to hay, during summer, should not be tied if it can be avoided. I have found with four different ones, thus kept up, great benefit from giving the horse liberty to go into the yard or under the sheds when he pleases, always keeping water to which he can help himself. It amounts to this. The feed that will keep a horse fat and sleek with this freedom, will not keep him from growing poor, tied in a stall, and standing on a floor.

No wonder so many stock horses have unsound feet, when they are thus kept tied, and standing the whole year. A good bed of some kind is quite essential to the comfort of the horse, at any age. I have given this, *not* in the presumption that my deductions are infallible, and shall always hear respectfully the opinions of those whose experience has been greater than mine.

North Thetford, Vt., 1858. H. C. FITCH.

For the New England Farmer.

AGRICULTURAL TRANSACTIONS IN MAINE.

Whoever has travelled through the sea-board counties of the State of Maine, and noted the generally hard features of the soil, must have thought that "farming in Maine is a hard business," and such has been the common saying of her own people these many years. Other people have heard of her large crop of pine trees in former days, and of potatoes, until the advent of the "*rot.*" The statistics of American commerce give her credit for a large annual yield of *shipping*, wherein she excels the world; and in other branches of productive industry, Maine holds a respectable rank.

But who would look to that State, and her thin soil—cold, sterile, reluctant, and when not generously overspread with rocky boulders and cobble stones, sands and gravel alternate with clays whose firm tenacity is a fair emblem of the steady purpose and adhesiveness of the people there dwelling,—who would look to a location and soil like this, as the soil of Maine is generally supposed to be like this, *for an improved and improving agriculture?* Yet there it is to be found in the hands of many clear-headed and hard-handed farmers, who can both try a practical experiment, and write an intelligible description of its method and results; who are not afraid to plow deeper, cultivate more thoroughly, drain wet fields, double and quadruple their manure by composting with leaves, turf, muck, &c., build barn cellars and other shelter for manure, and a few who had the nerve to venture on a systematic rotation of crops, in defiance of all intimations of unknown evils to befal those who thus left the time-honored walks of their forefathers. And these men are beginning to take two or more tons of hay per acre from lands that had not been known to yield one ton per acre in the memory of the present generation of young men, without any increased expenditure of money or labor, by using them in the right direction. Crops are obtained of grain and roots that would compare favorably with those of the most fertile lands in the West or South. This beginning of improvement is like a little leaven in a large measure of meal, but it is gaining, and will leaven the whole lump.

The Legislature of Maine, after several abortive efforts to aid agricultural improvement, two or three years ago provided for the organization of the present Board of Agriculture, which, though limited and restricted in its means and powers, (by that cautious policy which would ascertain if agricultural improvement be a public benefit—if it be wise to prove farming profitable, before enabling it to take efficient action,) has already accomplished a large benefit. Thus authorized, such men as Dr. Holmes, of Winthrop, (Editor of the *Maine Farmer,)* S. L. Goodale, of Saco, the able and thorough going Secretary of the Board, and their associates, have made the best use of the means at command for direct and practical effect.

The first report made last year, and an admirable work of its kind, descriptive of the present state of agriculture, with a brief *resume* of past legislative and associated effort in its behalf, contained so much that was useful and sensible that even the Legislature were driven to approval, with an appropriation (so small as to be a reproach to the State,) for another year. "The Second Annual Report of the Secretary of the Maine Board of Agriculture" is now in press, and we have seen some of the advanced sheets. They are very interesting, and eminently practical, and contain a collection of opinions, details of experiments, plans of improvement, and results obtained in different localities and soils, and in such variety of circumstances, as will afford some useful hint to every one—all from practical farmers in various parts of the State. Blended with these, Mr. Goodale gives his own notes of observation and instruction, whether of science or art, theory or practice, in plain, but forcible terms, and free as possible of mere technical phrases. A good example of this occurs at pp. 127—130, in explaining the importance of shelter to animals, as economy of food, and the identity of food and *fuel* in processes of combustion and evolution of heat. Every branch of the farmer's many interests is considered, and with relation to the climate and other local circumstances, are all the suggestions applied.

But the most interesting portion of this work to general readers and young farmers, is its description of the Aroostook Valley and vicinity, visited and examined by Mr. Goodale last summer. This extensive region, far in the interior and almost on the frontier of Maine—but little more than a wilderness, with few inhabitants, is represented as having a deep, rich soil, not excelled in fertility by any land in the West, and a climate of great salubrity, where pulmonary disease is unknown, and though so far north, having seasons long enough to mature the common grain and root crops grown in other parts of the State.

I cannot ask space to say much more of this part of the report, but heartily commend it to the farmers of Maine, every one of whom should have a copy of the report entire. Let them look well at the land in Aroostook, obtainable at a nominal price, near home, where there is no fever and ague, with a market for all that they ought to sell, close at hand, and contrast it with land in the West, where at the present hour, the value of wheat is not enough to pay its transportation to market on the seaboard. For the benefit of invalids, and those who delight in many children, we quote the following in favor of the Aroostook climate.

"In the report (Surgeon's) from Fort Kent are mentioned numerous facts going to show both the longevity of individuals, and the rapid natural increase of population. For instance, six families living within the space of a mile had *one hundred and six* children in all. Twelve other families had ninety-three children, in an aggregate married life of one hundred and sixty-two

years, averaging a birth every twenty months in each family. One settler had nineteen children in eighteen years; another at the age of fifty-nine, had twenty; another had twenty-six, the mother being fifty-three years old. Many other facts are cited, showing that whatever the cold of winter or other peculiarities of climate, there is nothing to preclude the highest conditions of health and longevity."

Let the people and Legislators of Maine heed the councils of such men as their former land agent, Hon. E. L. Hamlin, in favor of opening this region of great natural wealth to communication with the seaports, and let farmers everywhere be encouraged by the evidence in Mr. Goodale's report that farming can be made profitable in Maine, for they would be inexcusable, who would fail in it any where else, while boasting of greater natural advantages.

Dec. 31. FOLLY FARM.

For the New England Farmer.

LITTLE THINGS,

OR, A WALK IN MY GARDEN....NO. 13.

Perhaps there is no one thing in which mankind so generally and so frequently make a mistake as in the neglect of little things. Let us look first at

THE SCHOOL BOY.

He makes his first mistake in supposing that it is of no importance if he is heedless about his spelling, his hand-writing and his reading. If he plays truant it is of little moment to him. But if he persists in neglecting these apparently little things, he will certainly grow up to be a bungler in great things. I have seen a boy spurn with contempt a subject proposed for composition, as for example, *a bee*, regarding it altogether beneath his attention. But Baron Cuvier, one of the most learned men the world ever saw, attributed his whole success as a scientific man to the study of insects. Sir Walter Scott, who is known to every literary person, at least, acquired his success by his attention to little things. Suppose he was visiting the ruins of some abbey, with pencil and note-book in hand, he would note down every insect, plant, rock or tree that he saw, and then interweave them all into his next book, to be read with interest by those who despise little things.

Every man in active life must attend to little things. Carry a check for a thousand dollars into a bank and the cashier would attend to the little circumstance of your signing your name on its back. It is a little thing of itself, but neglected it would soon ruin a bank. The sea captain must attend to little things or his ship will be wrecked. But it is

THE FARMER'S BOY

Who should learn this habit. A little hole in a fence may cause your whole garden to be destroyed. A little hole in a fence rarely ever grows smaller of itself; so a little duty neglected rarely ever passes unnoted, but results in some trouble. A little attention to that young cow will make her gentle. Much of a farmer's income is made up of little things, and he who does not attach importance to these little rills of profit will never enjoy a large stream as the result of their flowing together. A man may be stingy and mean, but this has nothing to do with strict economy in the use of time and money.

Having penned these thoughts which passed through my mind while tying up some little trees to stakes to prevent their being broken down by the snow, I remain as little as ever,

Bethel, Me., January 1, 1858. N. T. T.

BETHEL FARMER'S CLUB.

Officers.—N. T. True, M. D., President; D. F. Brown, Vice President; A. L. Burbank, Secretary; J. A. Twitchell, Treasurer and Librarian; Z. Thompson, G. Chapman, D. F. Brown, Com. on Subjects.

For the New England Farmer.

DUTIES OF CATTLE SHOW COMMITTEES.

MR. EDITOR:—I have glanced my eye over your fair sheet, (No. 2 of Vol XII.,) just come to hand, and am pleased to find the doings of my own county so handsomely noticed by you. While conscious that we omit many things that ought to be done, we feel proud of some things that we have done. As a general thing, I think our committees have felt more fully the importance of the duties entrusted to them, and the responsibility attached to their reports, than is felt in most societies. In truth the committees are the almoners of the bounty of the commonwealth, when acting in this capacity, and as much in honor bound to discharge their duty with good fidelity, as though ten times as much were entrusted to their awards. Suppose they should at hap-hazard, with no intelligent views of what they were doing, recommend an implement as worthy the confidence of the farming community—which really was of no value—and in consequence of such recommendation many of their neighbors should purchase such implements, would they not be putting forward false pretences? I think they would. It is not enough for them to say they intended right, and did the best they could. They should first be careful to know what is right, and then vigilant to do it, and nothing different.

South Danvers, Jan., 1858.

For the New England Farmer.

THEN AND NOW.

MR. EDITOR:—Several years since while travelling from Springfield to Boston, I made the acquaintance of a gentleman (all but his name) who had for many years been engaged in the cotton manufactories at Palmer. I asked him if he had not, during his connection with the business, witnessed a great improvement in the manufacture of cotton. "Yes," he replied, "but no greater than I have seen in human nature in general." To prove his assertion he gave me two short chapters of his observations, which I take the liberty to quote.

"When I came here, now more than forty years ago, we spun our yarns at the factory and people came from the towns around and took them home and wove them. After I had been here a little while I was sent into some of these towns to look

up cloth that had not been returned. I went through a part of Enfield, Pelham, Amherst and Belchertown. Their farming and living was of the meanest sort. The mowing fields were full of bushes. The fences were poor. The houses were small, unpainted and open. Back of the house stood a hay-stack, with a few poor cattle eating into it at the risk of being buried up. Right by the door was half a load of green wood, the axe standing in a log that the owner was too lazy to split. Sitting in the chimney corner within, you would find a man with his face burnt up with cider brandy, and about the house a poor, discouraged looking woman, with a few half-naked children. The school-houses are like the dwelling-houses, hardly fit for the cattle. As to the people I wanted to see, no one could tell anything about them. They had died, run away, disappeared nobody knew where. I went on a fool's errand.

"This was *forty years ago.* I did not go over the ground again till last year, when I went to buy timber for our new mill. It was another country. The bushes were out of the fields, the hay-stacks were covered by good barns. Nice painted houses stood where the old hovels stood before. The brandy drinkers, too, had died off, and the women and children, with their bright looks and neat, comfortable dresses, had no resemblance to the poor creatures I saw there before. I can show you a bill in which I am charged fifty cents for cotton cloth not so good as we make now for six, but I tell you, Sir, human nature has gone ahead in the last fifty years more than cotton machinery. It's mind, wideawake, that makes progress. We have improved our machines now, but we shall improve them more. *For every man's noddle now-a-days is on the think.*"

To those who mourn the lateness of their advent, and sigh for the past, I commend the above. It will aid them in forming another brilliant period about the dear old times. To others it may furnish the occasion of thankfulness for their happier lot, and an encouragement to still further improvement. X.

CANDY AND POISON.

A paper on "Colored Confectionary" was recently read before the British Association, from which we condense some valuable and novel information. We learn that, for economy's sake, confectioners, in coloring candies, &c., have recourse for their greens to Brunswick green, carbonate of copper, or arsenite of copper; for the yellows, to chromate of lead or gamboge; for their reds, to red lead, vermilion, or cinnabar; and for their whites, to white lead. These are only a few of the pernicious coloring agents used, and they are among the deadliest poisons. The way in which these poisons are laid on also deserves a word of passing remark. In some instances a very thin coating of the coloring matter is used, so as to spread over a very large surface a small portion of the material used; but in other cases the very reverse is the fact, and in one instance a quantity of arsenite of copper sufficient to destroy the life of a healthy adult was procured from a piece of ornamental table confectionary, not the size of a sugar almond. Confectioners have no reason to use these poisons, for there are harmless vegetable colors enough to answer their purposes. Among these are—for yellows, saffron, tumeric, French berries, quercitron bark, fustic-wood, and lakes of the last four colors. Reds—cochineal, lake ditto, including carmine, Brazil wood, madder, and lakes of the last two colors. Purples—madder purple, logwood and indigo, any of the lakes with indigo or litmus. Blues—litmus and indigo. Greens—sap green *(ramnus catharticus,)* mixtures of any of the vegetable yellows or lakes with indigo, including Persian berries and indigo. Nor would the products of their arts suffer in their attractive appearance by the employment of such colors. We most strongly advise every one who values his health, and perhaps his life, as matters are at present constituted, sedulously to avoid partaking of articles of confectionary exhibiting either blue or green, but especially of such as are green, these latter being but too frequently of a most deadly poisonous nature.—*Am. Druggist's Circular.*

For the New England Farmer.

WASTE NOT, WANT NOT.

Mr. H., of B., New Jersey, with a family of four adult persons, and with the intention of being strictly economical, deems it necessary to consume eight pounds of Havana sugar and one or two pounds of grained sugar a week, beside a good deal of molasses and a little honey and syrup. The aggregate is equivalent to at least five hundred pounds of sugar a year.

Mr. A., of J., in New Jersey, in a family of ten persons, several of whom are mere children, uses nine pounds of Havana sugar and one pound of loaf sugar, besides much molasses and syrup, every week. This is equal to the consumption of something more than five hundred pounds of sugar, yearly.

Mr. H., of ———, in the State of New York, consumes, in a family of little more the average size and number, from four hundred to seven hundred pounds of maple sugar yearly, besides some molasses and honey, and a small quantity of sugar from Havana.

Mrs. J. C., of E., in Massachusetts, in a company of about twenty persons, partly boarders and partly her own children, uses seventy-four pounds of sugar a month, besides several gallons of syrup and molasses; equal, it is believed, to about one thousand pounds of sugar yearly.

Now, reader, is not here a tremendous waste? In the first place, it is a waste of vital energy; for sugar is almost wholly carbon, and the terrible conflagration it causes in the lungs, exhausts, prematurely, the vital energies of the system and thus wastes the precious stock which God has assigned us, of health and life. But, secondly, it is a waste of property; for most of our food is sweet enough, without any addition of saccharine substance. Some of the articles which come to our tables contain from four to eight per cent. of saccharine matter; so that he who consumes six or eight pounds of food of various kinds a day receives from four to six ounces of sugar at the same time. And who that is not wiser than He who formed him and appointed him his daily food shall say that from a quarter of a pound to

a pound of sugar a day is not sufficient for nature's best purposes?

It is no trifling tax to pay fifty dollars a year for sugar, in a family of little more than ordinary dimensions. Yet many do it; and many more expend in this way from one-half to three-fourths that sum. Why, twenty-five dollars only, or one-half the maximum of this waste, would buy three barrels of the best wheat flour, which would make about eight hundred pounds of good bread, or more than two pounds to a family daily for the whole year; or it would give twelve hundred pounds of Indian meal; or some four or five pounds of Indian bread daily for the same time. Is there then, in the use of what as Christian economists we may justly call extra sugar, no waste? Is there no practical disregard of the injunction, "Waste not, want not?" And to people who waste thus, is the discipline of hard times unnecessary? W. A. A.

For the New England Farmer.

UNDERDRAINING.

MR. EDITOR:—Enclosed is two dollars to pay for the *Farmer* another year. I am much pleased and instructed with it, because I get the experience of so many of my brother farmers upon agricultural improvements. I am glad to see the subject of underdraining is beginning to be discussed in the *Farmer*. From the little imperfect experience that I have had, I feel satisfied that it will prove one of the greatest improvements that can be made in New England. I think it would be much better for those who have any spare income, to spend it in underdraining than it is to purchase more land. I feel satisfied that a great deal of land, that is now cultivated with great difficulty because it is so late in the season before it can be worked upon, might by proper underdraining be made to produce double the amount that is now obtained; beside having the convenience of working upon it early in the season without any fear of being injured by drought—for land that needs underdraining, if properly plowed, will seldom be affected by drought. I hope to see more upon this important subject from the pens of those who are better acquainted with it than the writer of this article.

THOMAS HASKELL.

Gloucester, January 1, 1858.

STOP IN TIME.

Young man, you who take your glass of grog, because it is fashionable, accept a friendly warning of your danger and stop in time. The custom is fraught with danger, and so sure as you persist in it, so sure will you become a slave to the bottle. You may think there is no danger of this—that you are so strong within yourself that you can stop at any point upon the road to ruin and retrace your steps with ease. Deluded man, you may see your error when it is too late; for there is a point upon the dangerous road from beyond which few have ever returned, and these few have performed the feat with almost superhuman struggles. You can break the habit *now*—its fetters are not rivetted as yet, and now is the time to break loose from a custom which will inevitably ruin you if you persist in its practice. You are strong enough now to stop, and you peril your life and your soul by risking the gathering danger any longer. Your helpless weakness will come upon you in an hour when you least expect it. You will be in the midst of a debauching revel, and then gaunt danger will suddenly stand out before you, and you will then feel your helplessness and want of power to grapple with a curse the most afflictive that ever scourged humanity. Stop in time.—*Spirit of the Age.*

THE PREACHING OF THE TREES.

At midnight hour, when silence reigns,
Through all the woodland spaces,
Begin the bushes and the trees
To wave and whisper in the breeze,
All talking in their places.

The Rose-bush flames with looks of joy,
And perfume breathes in glowing;
"A Rose's life is quickly past!
Then let me while my time shall last,
Be richly, gaily blowing!"

The Aspen whispers, "Sunken day!
Not me thy glare deceiveth!
Thy sunbeam is a deadly dart,
That quivers in the Rose's heart—
My shuddering soul it grieveth!"

The slender Poplar speaks and seems
To stretch her green hands higher;
"Up yonder life's pure river flows,
So sweetly murmurs, brightly glows,
To that I still aspire!"

The Willow looks to earth and speaks:
"My arm to fold thee yearneth;
I let my hair float down to thee;
Entwine therein thy flowers for me;
As mother, child adorneth!"

And next the wealthy Plum tree sighs:
"Alas! my treasure crush me!
This load with which my shoulders groan
Take off—it is not mine alone,
By robbing, you refresh me!"

The Fir tree speaks in cheerful mood:
"A blossom bore I never;
But steadfastness is all my store;
In Summer's heat, in Winter's roar,
I keep my green forever!"

The proud and lofty Oak tree speaks:
"God's thunderbolt confounds me!
And yet no storm can bow me down,
Strength is my stem and strength my crown;
Ye weak ones, gather round me!"

The Ivy vine kept close to him,
Her tendrils round him flinging;
"He who no strength has of his own,
Or loves not well to stand alone,
May to a friend be clinging."

Much else, not half forgot, they said;
And still to me came creeping,
Low-whispered words, upon the air,
While by the grave alone stood there
The Cypress mutely weeping.

O! might they reach one human heart,
These tender accents creeping!
What wonder if they do not teach?
The trees by starlight only preach,
When we must needs be sleeping.

Tennessee Farmer and Mechanic.

LETTER FROM MR. BROWN.

Washington, Jan. 21, 1858.

MY DEAR SIR:—In my last letter I closed a brief account of the transactions of the U. S. Agricultural Society, spoke of the Aquarium at Smithsonian Institute, and had a word upon general matters. Since then I have visited most of the public buildings and grounds in the city, looked in several times upon both branches of Congress, exchanged civilities with many old acquaintances, and have found every where something to interest and instruct.

The general appearance of the city has been very much improved since my visit to it in 1856. A new style of architecture has been introduced in the construction of dwellings, which greatly relieves the eye from the monotony of high, unornamental brick walls which were every where peering to the clouds. A large number of the streets are also lined with fine trees for shade, such as the maple, elm and ailanthus, which will soon afford protection from hot suns, and be highly ornamental to the wide and glaring sidewalks and streets. During the administration of Major B. B. FRENCH, as Commissioner of Public Buildings and Grounds, he caused several thousand shade trees to be planted, which are now greatly improving the appearance of the city, as well as having a highly salutary effect in a sanitary point of view.

The *General Post Office* building, which is constructed of white marble, has been nearly doubled in size since the first part of it was erected, and is a noble structure. The *Patent Office* has also been greatly enlarged, occupies a whole square, and is the most magnificent of all the public buildings, with the exception of the Capitol. The *Treasury Department* has been largely extended, and when finished will present the longest and most imposing colonnade to be found in the world. These buildings are all in the process of completion, affording employment for a large number of men, using vast quantities of raw and manufactured material, especially iron, and making a quick and excellent home market for all the products of the farms in that region. Judging from the appearance of the workmen as I passed them, I should think a large portion of them were foreigners; those engaged on the coarser work, such as excavating, removing stone, lumber or iron, being Irishmen, while those occupied as stone-cutters or sculptors, were Germans, and the painters, or at least those engaged in the fresco painting, were Italians.

But the building which most attracts the attention of all, is the Capitol, as its magnitude and high position give it a prominence over all others—indeed over every thing else. It is constructed of white marble, a large portion of which is brought, I understand, from quarries in the town of Lee, Mass. The new wings are covered in, the roofs being iron and cement with plates of glass three-eighths of an inch thick. These plates are of sufficient strength for workmen to travel over in any direction, but were readily broken to atoms by the terrific hail-storm which occurred in Washington last summer, accompanied by thunder and lightning, so that "fire and hail actually ran along upon the ground!" Thousands of panes of glass were broken and the gardens and crops torn to pieces and scattered abroad wherever the storm passed. The hail stones were as large as common-sized hens' eggs, and fell with tremendous force. It was represented to us as a terrific scene. Where blinds were not closed there were showers of broken glass as well as hail, and it was found difficult to close those that were open, the blows of the stones were so rapid and heavy. All animals sought shelter; fowls fluttered in wild confusion—horses broke from their fastenings, and cattle ran bellowing from their pastures in paroxysms of pain and fright. In the glass houses at the *Botanical Garden*, and the green houses of the city there were scarcely any whole panes left, while the plants were sadly broken and riddled and scattered about.

The grounds now enclosed around the Capitol have an area of about thirty acres, and are pleasantly laid out and planted with a great variety of trees and shrubs, while plats of various shapes are filled with a variety of flowers blooming in succession from February until November or December. Some of the fine maples, American or English elms, and a few sycamore or button wood trees, have already attained such a size as to obstruct the view of the magnificent building itself, and already need a judicious thinning and pruning. It is now in contemplation to enlarge these grounds to more than double their original size, and I understand that a committee of both branches have agreed to make such a report. Such an enlargement of the grounds becomes necessary since the extension of the building, as the wings now extend north and south, to the very sidewalks of Pennsylvania Avenue itself. It is the intention to increase the space on all sides of the present grounds, and thus bring them into proportion with the grandeur and magnificence of the structure to which they must always be the beautiful and appropriate surroundings.

The Capitol is a miniature world, and a world of wonder, too. Its length is 740 feet, and its width 270, and covers, including its terraces, which enclose a series of rooms, some five or six acres of land. The new dome now in process of construction will surpass in grandeur, in beauty of conception, in style and magnificence, any

thing of the kind on this continent, and perhaps not excelled by any similar structure in the world. It will rise 300 feet from the base, and 230 feet from the top of the building, and will be surmounted by a colossal figure representing the Genius of America, designed by Crawford. The pediments in the extensions are also to be filled with colossal statuary, much of which is already cut and ready to occupy its place.

Many of the rooms are finished and painted in fresco with exquisite taste and beauty. The colors are brilliant, and are not placed on the surface merely, but are imbedded *through the entire thickness of the mortar*, so that if a fourth of an inch of the plastering were scraped off, the painting would still remain. The designs upon the walls are emblematical, or illustrative of the business of the committee which occupies the room. In the room of the committee on *agriculture*, for instance, Cincinnatus, and his oxen, men and plow are represented as at work in the field, and at the opposite end of the room Gen. Putnam with his hands are figured as engaged in rural labor,—while all the ceiling glows with the ripened harvest, with golden grain and luscious fruits. In the room of *naval affairs*, the engines of war, and in that of *commerce*, bales of goods, views of distant lands, or fine models of merchant ships, with their spreading sails whitening every sea.

The floors in the passages are constructed of a material made of ground flint and clay, baked very hard, aud are inlaid with various colors. The blocks are three-quarters of an inch thick, cut into various shapes, and laid so as to form a mosaic or tesselated pavement, which is very bright and beautiful. The roofs are cast iron, and to prevent an outward pressure of the walls by the expansion of the iron in hot weather, the ends of the rafters rest on a series of rollers on the top of the walls, so that as they expand, they roll out, and return as they cool and contract.

The new Hall of the House of Representatives is vast and magnificent; the ceiling is stained glass, 35 feet from the floor, and above this, the glass roof admits the light, which streams down and kindles the rich painting and gilding into a soft and delightful glow. The chamber is lighted from above, is in the centre of the new south wing, and is entirely excluded from all external objects and sounds. In its walls around the room are 18 panels to be painted in fresco, one of which only is now filled. Galleries extend around the room, back of which are many niches yet to be filled with statuary. Between the Hall and the outsides of the building are corridors, rooms with tesselated pavements, for hats and coats of the members, or clerks, or committees, or retiring rooms.

Some writers have commented with free pens upon the design and finish of this room, as being constructed adversely to the principles of acoustics, ornamented in a tawdry and whimsical manner, and without the exercise of a just and refined taste. It seems to me that these objections are somewhat captious, and at least not well-founded On entering the Hall for the first time, I felt a gush of pleasure for which I was not prepared, because impressions to the contrary had been previously received. There was a soft and pleasant light, but no glare; the air was warm, but pure and elastic, and, save what noise was attendant upon the business of the session, the bustle of the busy world had no admission there. There is much gilding and bright colors in painting, I admit, but these seem necessary to give a cheerful aspect to a room so secluded from the direct solar light. The finish is gorgeous, but not tawdry or whimsical. In the original design by WALTER, this room extended to the outer walls, but was revised by Capt. H. C. MEIGS, of the corps of Engineers, who is in charge of the extension of the Capitol, the Post-office building and the construction of the Washington Aqueduct. One of the charges urged against the Representatives' Chamber is, that little can be heard on the floor or in the galleries when a member is speaking; but this cannot be the fault of the room, for on the Sabbath, when the passions are hushed, and the services of the place are conducted "decently and in order," the faint voice of the preacher can be distinctly heard in every part. When the distinguished Virginian, ANDREW STEVENSON, was Speaker of the House, there was a proposition to alter the Hall, and several members called upon him to inquire, if it were possible to remedy the difficulty in hearing? He promptly replied, "*certainly, let every member behave like a gentleman! and there will be no difficulty.*" And this *is all* that is necessary. If there were *no desks in the Hall, no franking of documents, no letter writing, no conversation, and no reading of newspapers*, there would be no difficulty in hearing the speeches of members, and the business of the session would be done in about half the time usually occupied heretofore. Capt. MEIGS did not undertake to construct a room where a man's voice could be heard despite the scratching of hundreds of pens, the rattling and cracking of hot political newspapers, the rushing of pages and the tumbling of huge tomes into wooden boxes! As well might the House assemble on the sea-shore, and ask that remorseless element to be still, as to transact business comfortably under the existing circumstances in that Babel of confusion, the House of Representatives of the United States. I am inclined to the opinion that Capt. MEIGS has achieved a com-

plete success, and that not only this room, but the skill with which he has projected, and is executing his plans, redound to his fame as an Engineer of no common order. He is a gentleman of commanding personal appearance, of great urbanity of manner, quick to comprehend and suggest, and an able and faithful public officer.

The *Library of Congress* is on the west front of the capitol, from the piazza of which there is a commanding view of the cities of Georgetown and Alexandria, and a long reach of the Potomac river and valley, and the forests that skirt the western shore, as far as the eye can reach. Large additions are annually made to the Library, and since its destruction by fire a few years since, it has been rebuilt with considerable splendor, and highly finished in every part. Mr. MEEHAN, Librarian, and his Assistant, CHARLES W. HINMAN, Esq., are entitled to my thanks, for kind personal attentions during my perambulations over the Capitol.

In the process of constructing this massive pile, I was informed that every stone that is laid into the face of the walls is sketched upon paper before it is cut, thus giving the workman an accurate idea of what he is to bring out of it.—Every part of the outside of the work is also photographed as the work progresses, so that the appearances of the building in its different stages are all preserved, and, perhaps, may hereafter be published. Mr. ——— WOOD conducts the operations of this beautiful art, and it will afford me sincere pleasure to reciprocate his kind attentions whenever he may visit our city of notions.

Delegations of the *Pawnee* and *Sioux* tribes of Indians are here, and are large, well-formed and fine-looking men. They are dressed in blankets with broad red stripes, their faces painted in Indian Chief style, and their heads decorated with the feathers of various birds. Their chins are as innocent of beard as that of a woman, but their countenances betoken energy and a stern will. They are treated with marked attention by the government, and everything is done to impress upon their minds the power of the pale faces whose guests they are.

The government *Botanical Garden* is situated west of the Capitol and immediately across the Avenue from the Capitol grounds. It is neither large nor extraordinary in any respect, otherwise than as containing a collection of the plants brought by Commodore PERRY in the Japan expedition. These, of course, are new to our people, and are therefore interesting. Among the plants there I saw the *cinnamon* and *bread fruit trees*, the *India rubber* and *palm trees*, the *guava tree*, from the fruit of which the excellent jelly of commerce is made, several species of pines unlike any of ours, the *rose wood tree* and the *tea plant*, some of the latter being in blossom. The plants, grounds, &c., are in the care of Mr. WILLIAM R. SMITH, a gentleman educated in the Kew gardens, in England, and to whom I am indebted for kind attentions.

I shall leave here to-morrow and after spending a few days in New York, be at my post again, as usual. Very truly yours,

Joel Nourse, Esq., Boston. SIMON BROWN.

For the New England Farmer.

WINTER BUTTER AND DR. ALCOTT.

MR. EDITOR:—I saw an article in the *Farmer* of Jan. 2d, from the pen of Mr. Silas Brown, in regard to making winter butter. Allow me to add a word of my experience. He says, "we set the pans on the stove or some other hot place." Now I much prefer to place them over a kettle of boiling water, as then there is no danger of burning the milk or melting the pan, which is frequently done when set on the stove, unless great care is used. In regard to churning as often in winter as in summer, I think those who have but a small dairy, say but one cow, would find it quite impracticable, as they would often find themselves minus the cream. My plan is, when I gather cream but slowly, to set it where it will freeze and keep so, till I get enough for a good churning, then thaw it gradually and bring it to the right temperature; to it may be added carrot juice if you choose. I do not think that freezing the cream after it has once been scalded, detracts one iota from its goodness or adds in the least to the labor of churning.

After all, if we would only take Dr. Alcott's advice in another column, we might save ourselves all this labor and trouble. I think we women ought to go down on our knees to thank him for his efforts in striving to lighten our burdens—and yet, when I eat bread and milk with a knife and fork, I always want either the cream or a little sprinkling of sugar added, and a hasty pudding made of corn or rye meal, and boiled rice, occasionally, by way of variety.

Gardner, Mass., 1858. Mrs. H. BARLOW.

HORN AIL—HOLLOW HORN.

There is no such thing. This is our settled belief; or at most it is merely an incorrect name for some ailment, which has no more to do with the horns than with other parts of the body not particularly diseased. The horns are at the base exceedingly thin as we all know, they are very good conductors of heat, and they cover a bone, the pith, which with its integuments is exceedingly vascular, as is evinced when a horn is broken and the blood-vessels ruptured, the flow of blood is vastly greater than when any other bone is broken or bruised. Hence it is that by feeling of the horns it is easy to ascertain the general temperature of the animal—if it is feverish and heated the horns are hot, if debilitated its energies in a measure prostrated, the horns will not be so warm as usual. Standard writers on veterinary practice either deny the existence of the disease or say not a word about it.

CULTURE OF THE GRAPE.

The Grape conspicuous among Vegetable Productions—Quickness of Growth—Great Age—Its exemption from Blight and other Diseases—Type of Plenty—Position for Borders—Pruning—Manures for—General Cultivation—Mode of Keeping.

The idea long prevailed that the grape could only be cultivated by a few persons, enjoying the most favored localities, and who had given the subject long and careful attention; that there was some *mystery* about it which could not be fathomed by the common farmer or gardener. Happily, that idea has nearly, but not quite, lost its force, and large numbers of persons are availing themselves of the benefits which the vine and its products confer upon the people. This good work has been accomplished, mainly, through *the practical treatises of the culture of the vine*, which have from time to time been laid before the public. The perusal of these treatises took away that *mysterious air* which so long enveloped the subject, and led so many to a trial, that thousands are now seeking for some plain, practical rules for planting and tending the vine, and for preserving the fruit. These treatises may be purchased for 50 cents to $1,00 each, and any one of them would be of service to a person who intends to cultivate but a single vine. Clement Hoare, J. Fiske Allen, Charles Reemelin and Robert Buchanan have each prepared a work of sufficient clearness to enable any one to take up the matter understandingly, and to prosecute it successfully.

The first mentioned writer states that "of all the vegetable productions of the world which the skill and ingenuity of man have rendered conducive to his comfort and to the enlargement of the sphere of his enjoyments, and of the increase of his pleasurable gratification, the vine stands forward as the most pre-eminently conspicuous. Its quickness of growth, the great age to which it will live,—so great, indeed, as to be unknown; its almost total exemption from all those adverse contingencies which blight and diminish the produce of other fruit-bearing trees; its wonderful fertility, and its delicious fruit, applicable to so many purposes, and agreeable to all palates, in all its varied shapes,—combine to make it out as one of the greatest blessings bestowed by Providence to promote the comforts and enjoyments of the human race." It has been mentioned by most of the old writers, and strikes us with equal force now, as the type of plenty and the symbol of happiness, when we see its beautiful vines creeping over lattice-work, or its tempting clusters shining on the autumnal sun.

Some fine grape may undoubtedly be found that is sufficiently hardy to ripen in our most northerly States; but if this is not so, their seeds should be sown in large numbers through a series of years, until some one will be produced conforming to the climate in which it grew. It is believed, however, that the Concord, Diana, Delaware, Rebecca, Union, and some others, will ripen in any of the northen States in favorable seasons.

We now propose to give a few plain suggestions in regard to vine culture, which we are enabled to make from some personal experience, from observation, and a pretty extensive reading of the practices of the successful grape growers of New England: And first,

Of Soil and Position.—If a person will allow his mind to recur to the *position* and the *soil* where he has often seen the grape-vine growing in a wild state, he will find that it is usually in some sheltered nook, looking out upon the warm south, where the vines can stretch away over the tops of alders or young maples, and bathe in the sunlight and elaborate the juices which are to perfect their seeds,—and that the soil is not a compact, clayey one, but is a rich, sandy loam, kept light and porous by numerous stones and the roots of the surrounding growth. Here, then, is a hint from Nature herself, teaching us in what *position* and in what kind of *soil* to place our young plant. If the subsoil be stony or gravelly, so much the better; for the roots will run with eagerness into all the clefts, crevices and openings in which such subsoils abound. In these dry and warm situations the roots will spread themselves in every direction, and throw out innumerable fibres to cling around the warm stones, and extract from among them their peculiar food. This, then, suggests to us what

A Border Ought to be.—By *a border* is meant the strip of earth into which the root is to be planted. The *position* of the border, as has already been suggested, should be a cozy nook, facing the south, if possible. Then let it be sufficiently long to accommodate the number of plants to be set; the distance they are to stand from each other may be five to ten feet, to suit the fancy or to conform to the mode in which it is intended to prune them—as sometimes the vine is wanted *for shade* as well as fruit. If the soil is loose and gravelly below, it is not absolutely necessary to throw out the subsoil; but to secure a rapid growth and prolific bearers, it is best to dig down about three feet, and to fill the lower part with broken stones, oyster or clam shells, or especially old bones, and then fill in with the top soil that was removed, mingled with common barn manure, leaves, chip-dirt, &c., until the border is two or three inches higher than the surrounding soil. This will form a border and a bed in which the young roots of the plant will freely travel and find food, and particularly when they get down among the shells and the bones. Another advantage of such a distinctly defined border is, that you may cover it with leaves or

straw in the autumn, and thus keep the roots warm, and perhaps gaining strength for their summer labor. The border now being prepared, our first cut will show the usual appearance of the plant as received from the nursery, and the

Fig. 1.—Vine as obtained from nursery, with straggling shoots.

Fig. 2.—The same pruned when set out.

manner in which it ought to be pruned before it is set out. Now let the single shoot grow till about the first of autumn, then pinch off the end, so that the wood that has grown may become mature. Any *side-shoots* that appear during the summer should not be allowed to take a rank growth, but kept headed down, subordinate to the leading shoot, though perhaps not entirely eradicated from the stem. Our next cut will give the

Fig. 3.—Growth at end of first summer from setting out.

Fig. 4.—Growth at end of second summer from setting out.

Appearance of the Plant the Second Year.—The single strong shoot made the first year, (fig. 2,) should be cut down to three or four buds, only two shoots from which should be allowed to grow, the others being rubbed off, and the laterals, should any appear, pinched off at the ends, but not entirely removed, because it is believed they promote the general growth of the main stem. Pinch off the end of the shoot in autumn as before, and continue this process until the vine sends up a strong main stem as high as is desired. Any fruit which sets, with the exception of a single bunch, should be removed, as in perfecting fruit the vigor of the vine itself is retarded. Our next cut

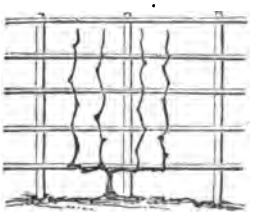


Fig. 5.—Growth at end of third summer from settting out.

Shows the Vine in the Spring of the Third Year.—The two shoots made during the second year, (fig. 4,) are now extended each way horizontally, and fastened to the newly-erected trellis. These horizontal branches, termed *arms*, are to be cut back at the same time, so as to leave two good buds on each, so that four shoots, two on each side, may spring up from them; observing what has heretofore been said as to suckers or side branches. The four shoots, as they advance in growth, should be tied to the trellis, in the position that the figure represents. This brings us to the next illustration,

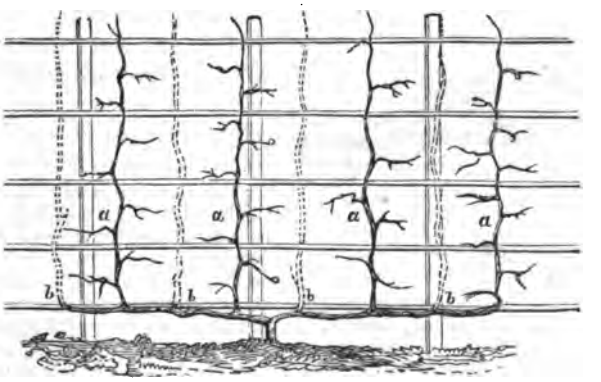


Fig. 6.—A full-grown grape vine, trained on the alternate or renewal system—the dark vines, the present year's bearers—the dotted ones, growing this year, for bearing next.

Showing the Cane or Renewal System. By recapitulating a little we can now show the whole matter distinctly: The first season one branch is trained up; in the fall this is cut back to 3 or 4 eyes, and the next season another is trained up and the first is extended; both are then laid down and trained horizontally, near the surface; and from each a cane is trained up, as pointed out by the letters *a*, *a*. The next season these will bear fruit, and two more canes, *b*, *b*, as shown by the dotted lines, will be trained up to bear fruit the following season, when the stems, *a*, *a*, are cut

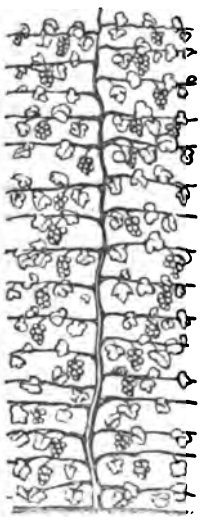


Fig. 7.—Spur pruning.

out near the horizontal branch, leaving one eye, and then new shoots trained, and so on.

The Spur System—Is the training up of the main stem, and of spurs horizontally, cutting back the spurs annually to 2, 3, or 4 eyes of the new wood, according to the strength of the vine, and number of spurs. When the spurs have extended too far, cut out a part, yearly, training up new ones, thus changing all the old wood to new, and as the vines become old and unproductive, cut down part at a time, and train up new ones.

The Pinching off of the Ends of the Side branches is illustrated at *b*, *c*. The branch has fruit upon it, but is still stretching away in a new growth; by *pinching* it off at the dotted line above *c*, the growth will be retarded and the wood and fruit more thoroughly ripened. It must

Fig. 8.—Portion of a grape vine in bearing, representing the bearing branches, from the sides of a last year's vine.

be remembered that the vine *always bears the fruit on the present year's shoots*, which have sprung from buds on the previous year's growth. The ripening of the fruit depends on healthy, well-developed leaves, which supply food to the forming berries, and therefore they should not be taken off, as some say they do, to "let in the sun."

Manures for the Grape.—Green, unfermented, rank manure, is not the best—but a compost of barn manure, rich loam, slops from the sink-drain, and mould from the forest, are all excellent when mixed. If this is scattered over the surface and worked under two or three inches, the roots will not fail to find their virtues.

How Grapes may be kept.—The most simple mode of doing this, is to prepare cheap boxes six or eight inches high, and of any convenient length or breadth, and place them in layers two or three deep, with merely a clean paper between them, leaving the boxes uncovered for a few days for evaporation to take place, and then place them in a cool, dry spot. They are also kept in barrels, packed in layers of cotton.

We close this already too long article with a few practical general rules for pruning the vine:

1. In pruning, always cut upwards, and in a sloping direction.

2. Always leave an inch of blank wood beyond the terminal bud, and let the cut be on the opposite side of the bud.

3. Prune so as to leave as few wounds as possible, and let the surface of every cut be perfectly smooth.

4. In cutting out an old branch, prune it even with the parent limb, that the wound may quickly heal.

5. Prune so as to obtain the quantity of fruit desired on the smallest number of shoots possible.

6. Never prune in the months of March, April or May.

7. Let the autumnal pruning take place as soon after the first of October as the gathering of the fruit will permit.

In the preparation of the foregoing article, we have not trusted entirely to our own experience, but have examined the works of the best cultivators who have written upon the subject.

ESSEX COUNTY MODEL FARM.—A correspondent of the *Traveller* writes:

"Your readers may not generally be aware that the late Dr. Treadwell left by will, his valuable farm in Topsfield, to the Essex County Agricultural Society, to come into possession of the same on the death of Mrs. Treadwell. The widow died recently, and we understand the society are about to take possession of the premises with the view of improving it under the management of the offices of the society, and to make it a model farm. The property of the society will be all centred there, and henceforth the cattle shows will be held on the premises instead of being changed from year to year to different parts of the county. This will be a decided improvement and on account of the central position of Topsfield, much more convenient for all parts of the county."

☞ To raise esteem, we must benefit others; to procure love, we must please them.

LEGISLATIVE AGRICULTURAL MEETING.

On the occasion of the first meeting, we were absent, in attendance upon the meetings of the U. S. Agricultural Society at Washington. Sickness prevented us from attending the meeting on Tuesday evening, and not having been able to secure the services of a competent reporter, we take the following account of the meeting from the *Daily Journal:*

The second Legislative Agricultural meeting was held on Tuesday evening, in the hall of the House of Representatives.

Hon. MARSHALL P. WILDER presided. On taking the chair, he expressed his pleasure in being able to take a part in the discussions incident to the series of meetings in progress. He then announced the subject of the evening's discussion, and proceeded to speak of the Chinese Sugar Cane. Too much had been expected of this plant, but considering the backward condition of its congener, Indian Corn, the past season, the experiment of its culture might be considered successful. It had been well ascertained that its culture for syrup was extremely profitable. That it would crystalize had also been well demonstrated by J. S. Lovering, of Philadelphia, from a letter of whom extracts were read. His experiments covered 67 days. The cane which was cut from the 2d to the 6th of November yielded a juice which crystalized with the greatest facility. Specimens of fine, dry brown sugar and excellent loaf sugar of his raising were exhibited. It grew at the rate of 1221 lbs. to the acre, beside 74 gallons of syrup. He found the best time to cut the plant to be when most if not all the seeds are ripe, and after several frosts.

In concluding, Mr. Wilder introduced to the audience Mr. LEONARD WRAY, of London, a gentleman well known in connection with the subject under discussion. Mr. Wray said that the African Imphee was undoubtedly identical with the Chinese plant. His experience as a sugar planter in East and West Indies confirmed the statement of Mr. Lovering in regard to the best time of cutting the plant. He believed the plant had a great future in this country, and the result of the crude experiments which had been tried should not be taken as tests. The African Imphee would not only produce bountifully of syrup, but wonderfully so of grain, and was one of the greatest blessings God ever gave to man.

Mr. LAKE, of Topsfield, said the cane should be planted upon warm soil. Cane grown on high land had more of the saccharine matter. The plant, if partially dried before the juice was expressed, yielded more saccharine matter. There was no doubt about the profit of the crop, and the speaker predicted next season an increase of one-third over the crop of last season.

The meeting was also addressed by Dr. CHARLES T. JACKSON, who coincided with the previous speakers as to the crystalizing properties of the plant, the time at which it should be cut, and the probable success of its culture.

Mr. BUCKMINSTER, of the *Ploughman*, exhibited a new specimen of squash, called the "Hubbard," possessing a hard shell, and a fine, yellow grain.

At the next meeting the topic of discussion will be "The cultivation of the Sugar Beet." Mr. Wray is expected to give the meeting some of the results of his observations of this culture.

We hope to be able to give a fuller report next week, and to keep our readers as well informed as in former years, of the doings at these meetings.

For the New England Farmer.

DR. LORING'S REPORT—SCIENCE AND EXPERIENCE.

BY WILSON FLAGG.

All true science is based upon facts. It may receive numerous hints and suggestions from theory and hypothesis, but facts are the only tests of truth. Though many great philosophers have not been "practical men," they have always established their opinions upon facts which they have diligently gathered from the experience and observation of others. If a by-stander be a philosopher, he gains a great deal more knowledge from those who are busy around him, in their respective employments, than they can learn who are at work; for while their attention is necessarily confined to their own occupation, he is learning something from every one of them. Facts may be learned in a multitude of ways:—from the experience of others, from our own experience and practice, and from experiments purposely made to ascertain the correctness of a theory or a doubtful assertion. It is evident that facts gathered entirely from one's own experience and practice, must necessarily be very limited, because they are confined to the narrow sphere of his own avocations. He only can obtain a comprehensive knowledge of facts who devotes himself to the collection of them from the multitudes among whom they are scattered.

The true method of forming a system of agriculture, based on practical experience, is not therefore to become a practical farmer, but to collect from the whole mass of intelligent farmers all the facts which they have learned from their own practice. It is thus the wisdom of the whole is brought into one view, and each individual is enabled to profit from every one's experience. It is not to be assumed that every farmer, however intelligent, knows all the facts which would be necessary to constitute the ground-work of a perfect system of agriculture. But among all the farmers in the country, there is a vast amount of practical information, not yet recorded in books, which if gathered into a volume and systematized, would be of immense value. Almost every man has learned some fact which is unknown to the generality of those who pursue the same occupation. Almost every man has some experience, with which no other person is so well acquainted as himself. Suppose every farmer in a certain county has obtained the knowledge of one important fact, and only one, and that no other person knows this fact; while each man's knowledge is thus confined to himself, it is of no service to the community. But were some person of intelligent and scientific mind to go round and gather all these facts, classify and arrange them in a clear and intelligible manner, and then read them to an audience of all these farmers—what

can be more apparent than that those who listened must be vastly wiser than they were before? Every individual has communicated his spark towards the formation of a permanent blaze of scientific light.

The object of our agricultural societies should be to gather these facts, and reduce them to system. By such a method, they would establish a foundation for the enlightened practice of agriculture, on the true Baconian system of philosophy. Nothing would be left to idle conjecture. Every idea would be deduced from the actual practice of men who have devoted their lives to experience. He who collects this information is not himself the instructor of the agricultural community; but the whole mass of farmers, through him as a medium of communication, instruct each other. In this way science, sitting at the foot-stool of common sense and enlightened practice, arranges and systematizes what she obtains from every man who has learned any new fact.

Gentlemen have been sent abroad to collect information from the experience of foreign agriculturists; and the knowledge thus obtained is of high value. But the most important of all knowledge to the farmer is that which is exactly applicable to the agriculture of his own district. The experience of the mass of farmers in New England is more valuable to the New England farmer than that of the farmers in any foreign country or section. The practice of agriculture must vary not only with every country, but with every district. Even two districts lying contiguous to one another may, in many respects, require a different practice, which is modified by climate; by the geological character of the place; by the length of time it has been under cultivation; by its moisture and dryness; by its elevation, and by the depth and native fertility of the soil. It must be affected also by the nearness or distance of a market, and by the extent and the demands of that market.

Hence the most valuable information for a farmer, in any county, is that which is derived from the experience of the farmers in that particular county. If a few individuals, without superior advantages of capital or location, have been remarkably successful in their farming, the experience of such men could not fail to be useful to others in the same district. But it would not necessarily follow, that the experience of a successful farmer in Ohio or Michigan, or even in the western part of Massachusetts, would be valuable to a farmer in Essex county.

I have been led into this train of reasoning, by the perusal of the ingenious and eloquent report of Dr. Geo. B. Loring, "On Farms," in the Essex Agricultural Transactions, for 1857. He recommends "that the services of a competent person be secured by the Society, to collect such information from the farmers of this county as will secure" certain educational purposes mentioned in his report. His object is to combine all the experience of the farmers of that county, from which a manual might be compiled, for the use of the pupils of an agricultural school, and for the private instruction of all who are engaged in agricultural pursuits.

By carrying out this project of Dr. Loring's, the county would be made, as it were, one grand experimental farm, in which a thousand diligent hands and practical minds are constantly engaged in learning new facts, testing the value of newly discovered plants, newly invented implements, and new ways and means of tilling and improving the soil. The Society, through the instrumentality of their agent employed for this purpose, collect the results of all this experience, so that the wisdom of no man, however humble, shall perish with him, and be lost to the world.

For the New England Farmer.

THE THINGS I RAISE—No. 7.

DAVIS SEEDLING POTATO.

This is one of the very best potatoes grown, taking everything into consideration, size, productiveness, hardiness, &c. I do not mean to say it is of the best quality for eating when compared with the State of Maine or Carter; but I do mean that it is a good eating potato, which added to all its other good qualities, makes it a very desirable variety. Its color is red outside and white inside, slightly tinged with pink just under the skin; large size, and very free from rot. This variety originated in Sterling, Mass., and has been under cultivation some eight or ten years. It is so far superior to Peach Blows, Vermont Whites, Pink Eyes, and those common sorts that are raised in the country, that I should advise all who grow potatoes for market in fall or winter to raise this sort for one. It requires a full season to mature. It yielded better than any other out of the forty kinds I raised last year.

STATE OF MAINE.

This is a fine eating potato, unsurpassed by any in the whole list, not excepting the Riley or Carter. It is not more than half as productive as the Davis, but superior in quality for the table. It is white outside and inside, and shaped somewhat like the White Chenango. This variety is quite early, being not more than a week later than the Chenango, to which it is superior. Should not consider it so profitable a variety for the market, except for early, as the above named variety.

JACKSON WHITE.

A sort of recent introduction, and promises well. I have grown it two years with fair success, but have never had it dry and mealy as the State of Maine. This is a white potato, nearly round, medium size, eyes deeply sunk, fair as to productiveness and hardiness, worthy of trial.

ST. HELENA.

This is an old and well known sort that was formerly cultivated in this region, but for some years has been neglected, but now comes out under other names, such as Laplander, White Mountain Seedling, &c. It is a very productive sort, very handsome on account of its good size and whiteness. Quite free from the rot. This potato is apt to be soggy, and for that reason is not so highly esteemed. JAMES F. C. HYDE.

Newton Centre, Jan. 18, 1858.

A SILLY REPORT, which has gained circulation and believers, that the seed of the Chinese sugar cane was poisonous has been put down by

Mr. D. J. Browne, of the Patent Office, who says that he has seen horses, cattle, poultry and swine feed upon it freely, both in an unripe and a mature state, without the slightest symptoms of injury or disease. Bread has been made from the flour in Texas, which was of a pinkish color, but was palatable, and no injury was suffered by those who ate of it. It is true, the seeds are very hard and almost indigestible, and should never be used in an unground state.

THIRD LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE N. E. FARMER BY HENRY T. HAINES.]

THE CULTURE OF THE SUGAR BEET, AND ITS MANUFACTURE INTO SUGAR.

The third of the current series of Legislative Agricultural Meetings was held in the Hall of the House of Representatives last Tuesday evening. The attendance was rather small. Mr. FELTON, Senator from Worcester, presided, and in opening the meeting, announced the subject of discussion to be, "*The culture of the Sugar Beet, and its manufacture into Sugar.*" He said he had the satisfaction to introduce to the audience Mr. LEONARD WRAY, of England, who had consented to deliver an address on the subject announced.

Not many years ago, said Mr. WRAY, in commencing, the beet root was not known as a plant of more value than the turnip; but in the wars of Napoleon it was brought into extensive notice. When France was in a manner sealed up, Napoleon had to foster the beet plant as the only source for obtaining sugar; since then it had gradually and extensively increased. The other nations of the Continent saw the benefits which France had derived from its culture, and now 175,000 tons of pure refined beet sugar are annually made on the Continent. Its average yield was comparatively small, but in some districts it yields very largely. Its culture was still spreading in Belgium and Russia. In France, in 1854, there were 354 sugar manufactories. But in addition to this, proof spirit was also extracted from the root. Last year the value of this item alone in France was $10,000,000. It was a mistaken idea, said the speaker, that this culture had injured France. The effect has been entirely to her benefit. The farmer who sells it to the manufacturer by weight found it extremely profitable. Hence he manured his land heavily, and obtained very large and very undesirable roots for sugar. To have a beet root in perfection for sugar-making, it should only weigh from 2 to 2½ lbs. By planting it at small distances apart, and manuring properly, the desirable size can be obtained. Increasing the size of the beet root decreased the quantity of sugar. Here was seen an antagonism between the cultivator and manufacturer. Such antagonism, he apprehended, would not occur here, where so much enlightenment among agriculturists existed. The beet contained a very large amount of sugar, but its product had been greatly disproportioned to the sugar in the plant. Mr. WRAY here exhibited some simple beet juice which he had that day expressed from a beet selected at random, which he said, measured to his astonishment, *nine* by the saccharometer—a number representing 16 per cent. of sugar or saccharine matter, or as rich as the cane of Louisiana. The juice was very dark, and much richer than that expressed from beets grown in France.

The leaves and crowns of the beet furnished two or three tons of fine vegetable matter to the acre, which was very good for cattle. A farmer in England saved a quantity of white beet and mangel wurtzel leaves, which he carefully buried in a pit, with a layer of straw between them and the earth. After eight or ten months he opened the pit and found a soft unpleasant-looking mass, which, upon experiment, he found was eaten with avidity by his cattle, and to the greatly increased yield of milk by his dairy cows.

The pulp left after the expression of the juice was purchased by the French farmer, who found it better for feeding to cattle than the beet itself, for the reason that certain injurious salts were removed with the saccharine juice. He thus gets back not only food for his stock, but valuable manure. Pigs, also, fatted readily on the pulp, especially if it was mixed with a little meal.

The speaker then spoke of the manufacture of alcohol from the beet root. It yielded a valuable spirit, which sold for 75 cts. per gallon. A French farmer from 420 acres of land of moderate quality, and of a slightly calcareous nature, netted over $73,000 in proof spirit.

The process of manufacturing the spirit was described according to the practice of Laplay, a celebrated cultivator of the beet root. The beets were cut into long, thin pieces, the fermentation being commenced in the piece. They were then put into a cistern containing a portion of fermenting juice, to which was added a quantity of sulphuric acid. After two days it was put into a cylinder and steam let in upon it. The steam passes through the mass, cooking it and depriving it of its alcohol, and leaving it in the finest possible condition for cattle. For this cooked pulp farmer were glad to give one ton of beets for two of the former. From a hundred tons of beet roots, 70 tons of the pulp might be obtained, and it might be kept two years. Its value for cattle in New England was alluded to.

The speaker called attention to the immense consumption of sugar in the United States. In 1855 and 1856 we raised 123,468 tons of sugar, and imported double the amount, making a drain on the country of $25,520,200.

The speaker thought this drain might be avoided by devoting our New England lands to the culture of the sugar beet, and thus inducing men to cultivate the beet, instead of going to the West. He had seen much excellent land in Massachusetts for this culture, lying idle, instead of yielding $200 to the acre, as it might. Then it would afford employment to the poor classes in that time of trial, the winter season. This was an important consideration. It would be a comfortable and pleasant occupation, to work in a beet-root sugar factory. The speaker liked to see ruddy women hoeing the beet-root. He did not consider it a degrading occupation, but one conducive to health, and involving a principle important to us all. He spoke particularly upon this point, because he deemed the labor of women important in connection with this culture.

In many places in France there were small distilleries, which were called agricultural distilleries, in which the farmer worked up his own crop, and by which he could obtain 419 gallons of proof spirit to the acre, beside 70 per cent. of the cosset, or pulp.

The capability of this country for this culture was undoubted. They had seen the remarkable result of his own experiment, before alluded to. It was a fair trial. The beet was selected hap hazard, but yielded an uncommonly rich juice. In France it generally marks, by the saccharometer, but 5, but here was juice marking 9.

Some beet-root sugar was here exhibited by the speaker. It appeared similar to refined loaf sugar, in the purity of its taste and color. All beet-root sugar that comes into commerce was white, for the reason that a disagreeable smell and taste belonged to it, in a less refined state. Calculating from the crude beet, they get 5 per cent. of this pure sugar, 80 per cent. of the juice, and 20 per cent. of the pulpy matter.

The specimen of sugar alluded to was grown in Konisberg, Prussia, and was brought to the meeting by Mr. CUNNINGHAM, of Boston.

The process of making sugar from the beet was next described. The juice was received into defecators, and a quantity of finely sifted lime added. Steam was then let on, and its action caused a skum to be thrown to the surface. When the juice was quite clear, the steam was thrown off, and the juice allowed to subside. The juice was then let off from the bottom into an animal charcoal filter. In passing through it became decolorized and deprived of all feculent matter, and came out very clear and bright. If the charcoal was new, the liquid would be nearly as white as water. It was then passed into a conical vessel, and finally into evaporators, thence into a clarifier with fresh milk and finely powdered charcoal, and then submitted to another filtration, by which the juice was made quite white. It was then put into the vacuum pan and boiled down into a granulating syrup. A ton of animal charcoal was used to a ton of sugar, and would be very expensive but for its capability of being reburnt and restored to its original power.

Mr. FRENCH, of Braintree, had never found but one instance where the beet could be grown successively on the same soil with profit. The crop should be alternated. He believed that the culture might be profitable. With reference to the labor of women, alluded to by Mr. WRAY, he hoped never to see women in the field, or any other out-door work, unless in that of the cultivation of a flower-garden.

He would not undertake to grow beets after beets or peas. It was an old adage that where our fathers lived we could live, and if it could be grown in the old country successfully it might be done here, and by the work of men. He believed the culture would ultimately be introduced.

Mr. BUCKMINSTER, of the *Ploughman*, would be glad to have a class of females about the cities, getting a livelihood by sewing and selling candy, work at the manufacture of sugar. He was also glad to be rebuked l y Mr. WRAY or the national practice of going abroad for that which we might grow, with so much facility, at home.

Mr. WRAY was asked as to the law of succession in the culture of the beet, and replied that the law of the exhaustion of soil applied to the culture of this root, as well as other crops. It draws from the subsoil its potash, and that returned to the soil, of course enriched it. He would recommend the use of the subsoil plow, and rotation of crops.

Mr. BROOKS, of Princeton, wanted to know how the soil could be exhausted if the residuum of the beet which contained the potash of the plant should be returned? He has raised beets for seven or eight successive years, by plentiful manuring the same soil.

Mr. WRAY said they did produce in France beets year after year on the same soil, but they were full of salts, and contained comparatively but little saccharine matter. It was only by highly artificial means that beets could be produced in this manner. It takes the great body of its potash from the subsoil, and was rapidly exhaustive of the soil.

Mr. FRENCH could not see how the soil would be exhausted if the fructifying properties in the beet were all returned.

Mr. WRAY said that Liebig assured us that every plant leaves its excrement in the soil, and this was an argument in favor of the rotation of crops. Plants would be injured by their own excrementitious matter.

Mr. FRENCH said that Liebig also said that every plant contains enough to re-produce itself.

Mr. FLINT, Secretary of the Board of Agriculture, moved that the thanks of the Society be tendered to Mr. WRAY for his interesting remarks. Carried.

The Chairman then announced that the subject of discussion at the meeting next week would be "*The preparation and application of Manures.*"

TO CORRESPONDENTS.

Many favors of our attentive correspondents have been received, which we cannot lay before the reader in a single sheet. Among these are "*Crops on Peat Meadows,*" "*Witch Grass,*" "*Sawed Shingles,*" "*Crows,*" "*A Day at Brighton,*" "*How to Prevent Hard Times,*" "*Egyptian Millet,*" "*A Farmer's Club,*" "*Real Estate in Rutland Co., Vt.,*" "*Value of Muck,*" "*Analysis of Soils,*" "*A Plea for the Robin,*" "*Leaves from a Lady's Note Book,*" "*Salt Marshes,*" "*Young Men on the Farm,*" "*Laying down Inundated Lands,*" and many other articles.

These articles are all of a practical character, most of them written by persons occupying and laboring on the farm, and who are qualified to speak from an experimental knowledge of the matters they discuss. Others are from ingenious and observing mechanics, who have too much sympathy with the world to hide the light which they are able to reveal: while some are graduates of our best universities, gentlemen who have not only qualified themselves to decide with just discrimination, to investigate with sound judgment, and to make such researches in our beautiful and attractive art as the common farmer can scarcely be expected to make, but whose love of the garden and the farm have scarcely known a limit, and whose practical operations have gone on even-handed with their untiring investigations and experiments in the soil itself. Besides this, there are occasional articles written by women of great intelligence, of close observation, and of much practical skill in horticulture and all that relates to the orchard and garden, added to those femenine graces which seldom fail to excite a love of the moral and beautiful in the young, and obliterate from their hearts a too common aversion to the farm. It would afford us pleasure, if it were proper, to mention the names of several such, and briefly sketch some of the benefits which they have conferred upon those whose occupation it is to cultivate the soil. If anything can impart value to an agricultural periodical, it must be such concise and practical articles as these; they are worth infinitely more than lengthened and finely-written essays, fresh and vigorous as they are from active hands and warm hearts.

We trust there will be no diminution of such healthy articles—the pure gold from the mine, and it shall be our care to communicate them to the working world in due season, on the fair pages of the *Farmer.*

It gives us pleasure to acknowledge our obligations to as able and intelligent a corps of writers, both male and female, we believe, as ever occupied the columns of any newspaper in New England.

TO PREVENT RABBITS from barking young fruit trees, give the body of the young tree a thorough rubbing with soft soap. This not only prevents the rabbits from barking them, but it protects them against insects, takes all the rough scales off, softens the bark, and renders them much more thrifty than they would be otherwise. This simple recipe will be of vast value to the farmers in many parts of the West.—Greasing will prevent rabbits from barking fruit trees but it will also injure the tree.—*Maine Farmer.*

BOYS' DEPARTMENT.

THE SCHOOL-HOUSE.

Scuffling should never be attempted nor permitted in the school-house, whatever the temptation may be. When a tempting chance is presented to knock off a playmate's cap, or knock an apple or snowball out of the hand, or do anything else that might by possibility result in a scuffle, you must not do it. Scuffle to your heart's content at the right time and place,—but the school-house is not the right place, nor study hours the right time. And you must not play at hop-skip-and-jump on the seats and desks. There is no good reason why you should take liberties in the school-room that would be improper in the parlor at home. Some scholars have the habit of dropping their apple cores and the crumbs from the dinner basket upon the floor, and throwing away pieces of bread on the floor with the butter side always down, and of dripping the water from their slates to the floor, and the disgusting habit of spitting on the floor. You must do no such thing. With the best judgment, and the utmost care, the atmosphere of a school-room is unhealthy; and every pupil, and every other person who goes into a school-house, should cheerfully do all that can be done to preserve the beauty and purity of the entire premises. And if anybody is so abusive as to bring tobacco into the school-house, and the teacher does not peremptorily prevent it—or if anybody brings tobacco there at an evening or Sunday meeting—go to the trustees with a complaint; and if they do their duty they will put the tobacco-users out of the house with as much promptitude and as little ceremony as we drive the cat out of the larder, or a pig out of the garden—or a skunk out of the cellar. And if the trustees have a noisome chew in the mouth and a filthy pipe in the pocket, and therefore do not heed your complaint, go to the chancellor for an injunction against the nuisance.

As it is of great importance that the ground

around the school-room should be ornamented with trees and shrubbery, if it has not already been done, you may pleasantly amuse yourselves some of the stormy noontimes by drawing plans on your slates, showing after the forest trees have been duly placed, how you will plant a lilac in this spot, a snowball in that, an eglantine under one window, a cabbage-rose under another, with snow-drops between, and so on, till every place not wanted for play and play-houses has something ornamental upon it. And do not fail to intermingle with the trees, the moosemissie, the barberry and the like, whose tempting red fruit will invite the robins in the autumn, and perhaps induce them to return and nestle there in the summer.

And every district that is pecuniarily able should give the interior of the house an agreeable and elevating aspect by hanging the walls with historic prints and paintings.—*Independent Standard.*

OBSERVATION.—The habit of observation is one of the most valuable in life, its worth can never be too highly estimated, and it is one that can easily be cultivated. Never do anything without observing that all you do is correct. Do not ever take a walk without having your eyes and ears open, and always try and remember what you see and hear. By this means you will acquire more knowledge than can ever be learned from books, as you will find the information in exactly the form you are capable of receiving it. Read books and newspapers, but above all acquire observing habits, for they will be always with you, and ever ready to store your mind with the truths of nature.

LADIES' DEPARTMENT.

DRESS.

I am inclined to concur with the spirit of a remark once made by a distinguished country woman, I cannot at this moment call her name to mind, who thus expressed herself:—"I never will forgive a woman for being ill-dressed, or for bestowing a thought on her toilet after it is once completed."

A slatternly, dowdily dressed woman is no pleasing object of contemplation; neither is one who is everlastingly conscious of her costly robes and sparkling gems, who values herself, and expects to be valued, for those outward adornments that perish in the using.

It is well to be neatly, tastefully, appropriately attired, but it is *not* well that woman's profoundest studies should be confined to books and plates of fashion; that her loftiest aspirations should centre in her wardrobe and her jewel-case. Assuredly, my fair countrywomen, we are capable of nobler aims than these.

With an immortal destiny awaiting us, shall we fritter away the energies that were granted unto us for the accomplishment of far more exalted purposes, in pampering and adorning the frail body that so soon must see corruption, to the neglect of those higher and more enduring portions of our being over which death has no power? Shall this "mortal coil," that we must so soon shake off, engross our almost exclusive attention, while the poor hungry soul that should be developing for a glorious immortality, is left to starve on the husks and vanities of life?

Rather, let us make "goodly apparel" the subject of minor importance that it ever is, and ought to be, to a well regulated mind; and daily study so to live that, when we are called upon to lay down what, to each and every one of us, should have been the priceless boon of earthly existence, we may not cry out, in unavailing anguish, "Our days have been altogether vanity and vexation of spirit; and now when death, like a thief in the night, hath stolen upon us unawares, our eyes strive vainly to pierce the thick darkness that hides from our failing vision the golden gate opening upon a blissful immortality."—*Traveller.*

DOMESTIC RECEIPTS.

FLOUR PUDDING.—Beat two eggs and a little milk, and stir in five table spoons full of flour, making a batter. Boil one quart of milk, and when it boils pour in the batter, stirring well while it is poured in. Let it boil slowly for a few minutes. Eat it with sweetened cream or milk, or whatever sauce suits best your palate. It is a cheap, quick way of making a very pleasant and wholesome desert.

Wheat meal, unbolted flour, can be used instead of flour, which to our taste is still better. This is a home dish which we prize much. If we could introduce it into general use, we should almost esteem ourselves a benefactor.—*Valley Farmer.*

BREAD.—Dry bread, crusts, stale biscuit, etc., I always soak in warm water, mash fine and mix with milk, when I make bread. The loaves will not be so white, but will be moister—besides, it is economical, and every housewife must be saving these hard times. All the cold potatoes that are not hashed with meat, come to our table the second time metamorphosed into light loaves of bread.

MEAT.—The best way to use pickled pork, if it is too salt, is to cut it in slices, and soak it over night in milk and water, then roll each piece in flour, and fry in a little butter, the same as fresh fish. It is nice for a change.

BEANS.—For laboring men at this season of the year, there is nothing more nutritious and wholesome; besides, there is no other food of which a little will go so far and do so much good. Boil them three hours in plenty of water, with a piece of pork to flavor them just right. Put in pepper as soon as they come to the boil; when cooked a lump of butter and some cream or good milk. The meat and butter generally makes them salt enough. If there is plenty of soup about them, take them to the table in a deep dish lined with bread crumbs.

SALT FISH.—My way of cooking salt fish is, to soak them well, then wrap and tie them in a piece of old, thin white muslin, and boil them in plenty of water. Untie carefully, so they wont break to pieces, and season with butter and pepper.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR APRIL.

How awful is the thought of the wonders underground,
Of the mystic changes wrought in the silent, dark profound;
How each thing upward tends by necessity decreed,
And a world's support depends on the shooting of a seed!

The summer's in her ark, and this sunny-pinion'd day
Is commission'd to remark whether winter holds her sway:
Go back, thou dove of peace, with the myrtle on thy wing,
Say that floods and tempests cease, and the world is ripe for Spring. *Horace Smith.*

APRIL animates all living things; quickens the blood, giving it new fire and force, and starts the sap in all the vegetable kingdom, sending it dancing joyfully along into every spray and leaf and flower. The trees glow with a new delight, wave their glad branches, or bow with graceful ease to the passing breeze, as young girls bend in sportive grace on sunny slopes or flowery lawns. No reflecting being can be insensible to the charms of *Spring*; if he were so, he could not be *reflecting*—he would have lost the impress of Divinity stamped upon the race. He would be less than a brute or a clod; for the animals certainly feel a new life in the spring, as they give evidence in many ways. And do not the clods feel the electric fire, and swell with warmth and gratitude, and clothe themselves in beautiful attire, in cheerful green, in purple and white, and sparkle with dewy gems, and exhale their fragrance upon the soft air? Surely, surely, that must be a dark and brooding mind that the sweet influences of *Spring* does not kindle into a delightful glow, and lift it rapturously to HIM who brings the Seasons in their order, and gives each its appropriate duties and charms!

Since Spring, then, has already greeted you, we will speak of some of the incidents of the season, whether they come a few weeks earlier or later.

And there are the spring winds and rains, and their influence: those powers of the air, that for a season seem to wage fierce war in the heavens, and present all the fury of a battle between the retreating Winter and advancing Spring. The air comes whistling and roaming through the barns and about our chimney-tops, as though it had no object beyond expending its rage; whirling the amazed weather-cock till it creaks and complains in its despair of ever designating the quarter whence the unruly one cometh; rattling windows and slamming blinds until the nervous member of the family carefully wedges and fastens all "tight as a drum;" tossing and scattering the clouds and smoke; driving so many stout vessels on our dreadful coasts, and giving over the poor fellows on board to the mercy of the waves.

One is almost convinced that the Latin poet had arrived at the truth of it, when he represented a grim old jailer of the winds imprisoning them in a vast cave, while they, with the first chance, escape, and rush forth to commit a thousand wild freaks.

To this idea of the grim Æolus, and fitful winds that blow by chance, contrast the meteorologists of the present day, quietly reviewing masses of information derived from all quarters of the world, and at last astounding many of us with the declaration that there is *a system ruling the atmosphere that envelopes the globe, as well as the waters that cover it!* By discoveries already made, science proves that chance no more rules the directions and violence of the winds, than it regulates the rise of the tide wave, or the even more wonderful ocean-currents.

And to this conviction we must come in what-

ever direction we turn our studies, and one becomes appalled, almost, as he advances in life and sees how perfectly every detail of the vast machinery of the globe is constructed, and with what exactness their various offices are fulfilled.

And so we shall find it with the phenomena of the seasons: the snows of winter we are taught to regard as fleecy garments actually mantling the earth and keeping it warm, and the pinching droughts of summer are none the less valuable, drawing up by evaporation to the surface where it will be available, the mineral wealth that lies too deep for the roots to reach. So this change from *Winter* to *Summer*, from *Winter* to *Spring*, indeed, is not by a leap but gradual. The old earth must yawn, and stretch, and get his eyes open, before he springs into full strength and vigor for the work he has to do. Let us be patient, then, and remember what has been done.

Though all the little channels and pores may be shut close enough by the frost now—for they often are on the first of April—presently the rain soaks in a little way and the winds take up the superfluous water; the sun begins to be felt, the moisture from below seeks the light and is carried off by the wind again; the watery particles are presently distilled and return to the earth in warm rains. And thus these busy elements, air and water, keep at their round of work till the frost is driven out of the ground, the earth is in a fit state to go under the hand of the husbandman, and a subtle chemistry, whose mysteries we are beginning to find out, has prepared the soil for another season of plenty.

The popular mind long ago acknowledged the utility of these labors, and "the wisdom of many men" became crystalized, "by the wit of one" in the familiar proverb,

"March winds and April showers
Bring forth May flowers"—

which has doubtless consoled many a little girl-philosopher for a stormy, disagreeable half-holiday in the spring. [The boys are intentionally omitted; indeed, we fear they are more apt to believe that "it always storms of a Wednesday afternoon," while the promised flowers are not half compensation enough for them.]

It is difficult to repress the feelings which the season naturally calls up in the least sentimental of us. After the grass has fairly clothed the meadows in their beautiful verdure again, when the sun rises clear and warm, the blue-birds are flying from post to tree-top with their clear, liquid melody, the sparrows chirping and looking about the hedges for new quarters, then does not every one feel that the season gives him a new lease of life, that new health and strength are rising in his frame, that he has returned to a landscape that is familiar and welcomes him?

Poetry, appropriate to the season rises readily to one's lips at such a time, as the song pours from the swelling throats of the warbling birds, and it is nearly with the same exaltation of spirit that we begin a new agricultural year.

The vivifying spell has been felt beneath the wave,
By the dormouse in its cell, and the mo'e within its cave;
And the summer tribes that creep, or in air expand their wings,
Have started from their sleep at the summons of the Spring.

The cattle lift their voices from the valleys and the hills,
And the feather'd race rejoices with a gush of tuneful bills;
And if this cloudless arch fills the poet's song with glee,
Thou sunny first of April, be it dedicate to thee.

Horace Smith.

FARM WORK FOR APRIL.

The month of APRIL is the beginning of the agricultural year: that is, the farmer then enters resolutely upon those field labors which must continuously occupy his attention through the growing season, and until the ripened crops are gathered in, and winter again assumes the sway.

The labors of April to the farmer are something like those of furnishing a ship for a long voyage by the merchant. If he furnishes her well, puts in a liberal supply of provision and water, sees that every thing in the craft herself is "staunch and trim," and that an intelligent and resolute captain stands at the helm, it is reasonable to indulge the hope that she should return in good time, freighted with such a harvest as shall yield a fair profit on investments and risks.

And so it is with the *farmer*. If he is astir early in April, lays his plans with an intelligent foresight, and makes every thing "staunch and trim" for the summer voyage, he, too, may reasonably hope for such harvests as shall reward his intelligence, his skill, and his manual labor. Some of the things which his experience or his wisdom will suggest, will be to look early after the

Fences of the Farm.—As soon as the frost is out, and before the winds and sun have dissipated the moisture so as to permit plowing to be done, let the brush, rail, or stone fences be put in good order; not leaving "weak places," to invite a hungry animal to try his skill in getting over; because *once over*, and gaining a taste of your spring wheat or your clover, he will be strongly tempted to try it again and again. Make fences strong and sure in the spring, if you would avoid invasions of your fields while making hay or cultivating green crops.

Poached.—This is a term often used by farmers, and means, to be "*trodden with deep footsteps.*" What do you think, reader, of the practice of allowing cattle to roam at will over mowing lands in April? Do *they* receive any benefit, or the *land* any injury?

Mowing Fields.—Delays in *haying-time* are ex-

pensive—to avoid them, visit the mowing-fields and gather the broken twigs from trees, stones and rubbish of every kind. If the cattle ran in them last autumn, scatter their droppings now with a light beetle.

Plowing.—If drying winds and warm suns have carried off the excessive moisture, so that upon turning up a spadeful of soil it will crumble to pieces, it is pretty good evidence that the King of agricultural implements, the Plow, may now be put in use. But for the benefit of inexperienced operators, we say that they will do well *not to be in a hurry.* If the soil, upon being turned up, remains flat and compact, it will be difficult to remove it from that condition during the summer. It will be likely to remain in lumps, be uncomfortable to work upon, and will not accommodate the roots of your plants. But when the land is right, "plow deep while sluggards sleep;" go half an inch deeper than last year; then you will have a loose, porous, inviting bed for young roots to travel and feed in. Such a soil will admit heat and moisture, and those are just what the seeds and young germs want,—and when the May showers come they will descend freely among the new roots, carrying warmth with them, and leaving a portion of moisture and ammonia as they pass down into a lower stratum. Then the young rootlets will open their mouths and feed like a young child, and grow and send up their stems to find new joy in the light and air! Under such a condition of things the

Spring Wheat, Oats and *Barley* ought to be in the ground; but the barley ought to be on a gravelly loam, rather than a black loam; it loves a warm, dryish soil. Wheat and oats do better on a soil *not excessively* manured. If land is laid to grass with them, it is probably better to apply only a light dressing at the time of sowing, and add a portion to the young grass in the autumn following.

Early Potatoes.—After all that has been said in favor of early peas, lettuces, cucumbers, &c., we doubt whether there is any vegetable more grateful to the palate, or more healthful to the system, than a good mealy potato in July. Well, you can have them on your table "on the glorious Fourth," if you set about it on the first of April. How? Bring as many potatoes as you wish to plant into the kitchen, or any other *warm* place, in a box or barrel, and sprinkle a little fine loam, or old, fine compost among them, and keep the light out. In a short time they will sprout, then plant them in a *warm, sheltered place,* and on *new* ground if possible. Or, spread the potatoes on the grass in a warm nook, and cover them with horse-manure deep enough to keep them warm, and when sprouted plant them. The soil for them should be pretty rich, and when they are up, hoe often and keep all the weeds down.

A little Garden, well tilled, will afford a world of convenient things. Just think of it! Early asparagus, beans, beets, brussels-sprouts, cabbage, carrots, celery, cucumbers, chives, egg-plant, horse-radish, corn, lettuce, melons, mustard, onions, parsley, parsnips, peppers, peas, potatoes, pumpkins, radishes, rhubarb, spinage, squashes, tomatoes, turnips, sage, sweet-marjoram, sweet-potatoes, strawberries, blackberries, currants, gooseberries, raspberries, potatoes, &c. The family may find well nigh half its support from the garden during the summer and autumn months.

Get field crops in early.—Spring wheat, oats, barley and corn, are better for being in *as soon as the soil is in a fit condition to receive them.* The middle of June is early enough for millet, winter squashes, and ruta bagas. Some delay sowing carrot-seed until the last of May—our crops succeed better when earlier sown.

For the New England Farmer.

COAL TAR FOR CROWS.

MR. EDITOR:—In the *Farmer* of the 26th ult., appears an article on "The Crow," by "Young Farmer;" he seems to have been tormented by this colored gentleman. It may be acceptable to him, and perhaps to others, to know how to prepare their seed corn so that neither crows nor blackbirds, nor any other bird, will pull more than one or two grains.

Have your corn all ready, take about a pailful of boiling hot water, and add to it about a pint of coal tar; stir, and let stand for two or three minutes, and turn in your seed corn; stir it round three or four times, then turn out into a sieve so as to hold the corn together and let the water go; now roll your corn in ashes or plaster. All this must be done in the shortest time possible; when the corn is taken out of the water each grain will have a light coating of tar, and by rolling in ashes or plaster it keeps it from sticking to the hands. Crows will not pull up much corn planted in this way.

Some may say that corn will not grow after such a hot water process; but to such I would say try and see. MUMFORD.

Whitinsville, Worcester Co., Mass., Dec. 29, 1857.

REMARKS.—We are obliged to correspondents for several articles on "The Crows," which we cannot publish at present. They are well written, and amusing, but contain no special facts that could be brought into practical use. The article above distinctly specifies how some of the ravages of the crow may be prevented, and is, therefore, laid before the reader.

☞ The Cincinnati (Ohio) *Gazette* states that a bill has passed the Senate of that State prohibiting the intermarriage of first cousins. That paper says that public sentiment is in favor of that measure.

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

MR. EDITOR:—Upon examination of the bird I send you to-day, you will probably not at once discover anything very remarkable in its general appearance; you cannot fail, however, to notice that it has a large head and a sharp and strong beak, that betokens a life spent in bloody deeds. But when you look at its feet you will see no corresponding talons, that we always find in birds of prey. Its wings also are short and rounded, which renders it incapable of soaring and indulging in a prolonged flight, and you are perplexed, it may be, to know where to class the bird, or judge of its character by its points developed. And it would not be surprising, even after you were well acquainted with its habits, to find this difficulty of classification increased. Ray, Buffon, Brisson, Linnæus and Latham long ago could not agree in what order the birds of this genus should be classed. Some of our ornithologists of the present day, from the fact of its preying upon insects, class it in the order of insectiverous birds. But if the exhibition of rapacity, connected with unnecessary cruelty, give character to a bird, it should be classed with the rapacious birds. All animals that kill for the pleasure of killing, and more than suffices them for food, must be considered cruel. That broad head of our bird, armed with a strong and heavy beak, and moved by strong muscles, situated in its neck, when thrown back, inflicts a stunning blow like a slung-shot, or breaks the skull of its victim, usually a small bird. After it has satisfied its appetite, it continues to kill, and hangs up its dead in the crotches of small trees and bushes to decay. It has been thought by some ornithologists that our bird is provident by thus making provision for its future wants, that it is in fact hanging up its game, like an epicure, to ripen and grow tender. But such does not appear to be the fact, as it feeds only on fresh-killed meat. It likewise has the singular habit of impaling grasshoppers upon the thorn bush. I have seen some of this hung dried meat in my rambles in boyhood. A lady a few weeks since showed me a Yellow Rumped Warbler, in its winter plumage, that was found hanging by the neck in a crotchet twig of an alder, no doubt placed there by the bird under consideration. Its usual method, as we have before said, of killing its prey, is by breaking the skull with its beak, but it sometimes resorts to garroting its victim, by seizing it by its throat and choking it. This warbler that was found suspended, was evidently throttled. Jardine, speaking of the birds of this species, says: "They have all the character of being cruel and tyrannous, arising from the peculiar manner of impaling their prey upon thorns, or fastening it in the cleft of branches, often in a wanton manner, as if for the sake of murder only, thus fixing up all it can seize upon." A lady of my acquaintance informed me that during the last winter, one morning upon sweeping her parlor she discovered what she supposed to be a light blue-colored dove, endeavoring to come into the room by the upper sash of the window, where was hanging her canary in its cage. She dropped the sash, when instantly the strange bird came in and alighted upon the cage, and exhibited hostile movements, which being noticed by the lady she attacked him with a woman's best weapon, a broom, which she happened to have in her hand, but did not succeed in driving the marauder out at the window until it had killed her favorite bird by a blow upon the head. Such is the bold and burglarious daring of the bird before you. As it stands in some of our ornithological works, at the head of the order of insectivorous birds, it may claim some favor from agriculturists. Mr. Wilson supposed that its principal food was insects, particularly grasshoppers, and that it preyed only upon birds in winter. I am of the opinion that it would not hesitate, when pressed by hunger, to attack any small quadruped, as I have noticed it watching around a hog-yard, and endeavoring to seize the vermin that infested it. Its note is as singular as its habits, being like the creaking of a sign-board hinge! But it is time, perhaps, that I should close this communication, by announcing the name of the smart little bird you hold in your hand, and give some accounts of its breeding habits.

It is the Great American Shrieker or Butcher Bird, (*Lanius borealis vieill.*) During winter it is not uncommon in Massachusetts. Retires to the forest to breed, builds a large nest, the female laying six eggs of a greenish white color, thickly marked with pale brown spots.

Danvers-Port, Feb. 10, 1858.

FOURTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE N. E. FARMER BY ZENAS T. HAINES.]

THE PREPARATION AND APPLICATION OF MANURES.

At the Fourth Legislative Agricultural Meeting, held last Tuesday evening, Hon. Mr. PHELPS of the Senate, presided. On taking the chair he remarked that he had no practical knowledge of agriculture, and consequently had no suggestions to offer. The subject of the proposed discussion of this evening was one of great interest to those dwelling on the sterile soil where our lot had been cast.

Mr. FLINT, Secretary of the Board of Agriculture, was the first speaker introduced. He remarked that the subject of the preparation and application of manures was the great basis of successful farming in this section. Manures were divided into animal, vegetable and mineral; or, more commonly, into the two classes of barnyard and artificial manures. But animal manure was the kind in which the agriculturists of Massachusetts were the most interested. The importance of protecting such manures from the washing of rains was urged. Its soluble nature particularly required its protection from the forty-eight inches of rain that fall in a year. Liquid manures had been too much disregarded. A cow would void sixty lbs. of liquid manure a day, but by the ordinary management of farmers forty lbs. a day were lost, and with it a pound of ammonia to every 5½ gallons of the fluid. The great value of

ammonia as a fertilizer was dwelt upon, and the speaker mentioned the recent discovery of the mechanical and chemical power of the earth to absorb and retain ammonia. In conclusion, Mr. FLINT read a letter in relation to the general subject, from J. W. PROCTOR, of Danvers, who thought the manure used on a farm should, as nearly as possible, be made from what the farm produces.

Rev. Mr. SANGER, of Dover, was very favorably impressed with this idea in the note of Mr. PROCTOR, and fully acceded to it. Peat mud he deemed a valuable manure, and particularly adapted to the region where it was found, from the fact that it consisted of the washings, the leaves, and other accumulations of the land in the vicinity. The speaker had found great benefit from this manure on sandy lands. It was excellent in the growth of corn, potatoes and fruit trees. He would have it dug and exposed to the frost one or two winters. In regard to its effect on fruit trees, he has found it would make them bear well even on sandy and dry lands. As to the *application* of manures, he preferred to have only a portion applied broadcast, and the remainder in the hill, where it would give the plant an early and vigorous start.

Mr. ALLEN, of Oakham, remembered when the barn-yard was almost the only resource for manure. It was once deemed important to cart out and pile up the manures previous to their application, for the purpose of more finely pulverizing them. When he merely cultivated a garden, he found the water from the wash-tub, sink, &c., a valuable and important manure.

DAVID DAVENPORT, of Mendon, kept a horse and cow on three acres of land, and had more than they could eat. Yet all his manure was derived from the fluids created on his farm. His mode of preparation was to add water, and then plaster, to fix the ammonia, after which it was distributed over the land from a hogshead. He had found swamp mud, applied to sandy plain land, with ashes, in the proportion of thirty bushels of mud to one barrel of ashes, a valuable manure. It would make corn, even on that land, produce full an average crop. He had found this plain land productive of potatoes, with a previous crop of clover, stimulated by mud and ashes, and then turned in as a manure. The potatoes were sound.

Mr. HARVEY DODGE, of Sutton, spoke of the importance of using subsoil as an absorbent of the water collecting in barn-yards. It was hungry for ammonia. The speaker believed there was no necessity for Massachusetts farmers to go off after guano and phosphates. They h d the adequate materials at home, and could not afford to buy manures. The grass crop was the most profitable crop in New England.

N. A. RICHARDSON, of Winchester, bore testimony to the value of muck in a pulverized condition. He had found the effect of the pulverized muck far more powerful than muck in a raw condition. He had found nothing so valuable as muck in making a compost. It was true that "meadow muck is the mother of the meal chest." Guano was a convenient and pretty manure for flowers, but not suited to farming purposes. It had not the necessary bulk, heart and permanence.

Mr. DAVIS, of Plymouth, said fresh muck was a valuable manure for grass land. Very much depended upon the locality and character of the mud as well as of peat as to its effects. In his section he believed that muck furnished the foundation for cultivating the soil. They had found that sea-weed put into their potato hills had a very favorable effect. It equalized the moisture, and the potato grew large and mealy, even in very sandy soil. Ammonia water and lime from gas-works might doubtless be made valuable manures.

Mr. J. W. PROCTOR, of Danvers, spoke of the cultivation of the Derby farm in Salem. Twenty acres manured with a compost of night soil, barn manure, &c., yielded a profit of $200 to the acre, in garden vegetables. People in Salem and Marblehead found sea-weed a valuable auxiliary. Home materials were abundant, and there was no necessity to go away from home for manures.

Col. HAWKS, of Deerfield, thought the best mode of applying manures depended upon the soil. On clayey land he found it best to plow under the manure. On meadow land he would both plow in and spread on the top. He had had experience with guano, and found it better on sandy land than heavy land. It was better for broom corn than Indian corn, and was exhausted the first year.

JOSIAH QUINCY, Jr., of Boston, had been informed by Dr. DANA, the great authority in muck matters, that salt water muck might be more valuable than fresh water muck. He would like to have the experience of gentlemen on this point.

Mr. DAVIS was now engaged in digging salt and fresh peat, and recommends farmers to employ laborers in the same work. It could be done at this season, and furnish aid to the poor unemployed. The frost offered no impediment to the prosecution of the work.

B. V. FRENCH, of Braintree, said a cord of good animal manure was worth more than eight dollars to a farmer. He had a good deal of faith in meadow muck to be used in a compost. He thought considerable was to be derived from peat. It was estimated that there were 700,000 acres of muck meadow in Massachusetts. They were found near sandy lands. He accounted for their existence in the fact of their being in hollows, which

had collected leaves and other floating substances. To get rid of the acid he would mix the mud with horse manure. They could no more expect to get good crops from our soils unaided by manure, than to make good bread without good yeast. The application of ground bone was of great value in the production of cabbages, &c. Guano should never be sowed in windy weather, but it would be well to apply it during a rain. He had plowed in manures to the depth of nine inches, and lost it. There was a mystery, he said, in the practice of agriculture. He had concluded, after considerable observation and experience, that manure had better be covered one inch than four inches. Every means should be used to save manures—liquid and solid. Chemists agreed that the first was as valuable as the latter. The speaker questioned whether the water from the city sewers had sufficient fertilizing properties to warrant carrying it any great distance.

Mr. FLINT presented to the meeting a statement given him by Mr. NOURSE, founded on data suggested in previous remarks by Mr. FLINT, by which it would appear that the annual loss in liquid manures was $15 a year to each cow, or $3,900,000 a year on all the cattle in the State.

Ex-Gov. BOUTWELL asked Mr. FLINT if by that calculation the value of the liquid manure would not pay for the keeping of the cattle. The question was considered very pertinent, and created some merriment, but was not answered.

Mr. SPARHAWK, of Boston, said that so far as his experience went, there was no such thing as a specific manure for a specific crop. He preferred to apply manures in the fall.

W. J. BUCKMINSTER, of the *Ploughman*, exhibited a novelty in the shape of a box of very superior butter, wrought into various fanciful designs, such as shells, scrolls, &c., well calculated to ornament a tea-table. The butter was sent by PETER SWALLOW, of Dunstable, and elicited a good deal of praise for its beauty and sweetness.

At the next meeting the discussion of the subject of *manures* will be resumed.

For the New England Farmer.

FARMING REQUIRES STUDY.

MR. EDITOR:—Owing to the high value of the farmer's productions, many mechanics have recently left their business and taken farms, with the anticipation of making a fortune immediately; and living with that ease and luxury which they imagine country people enjoy. They should remember that all ought to understand the business best that they have been the longest time engaged in; and that if any one from any other business would prefer farming, let him begin understandingly.

He should know what, when and where to begin to plant; what, when and where, in the culture; what, when and where to reap. And can a person ignorant of all this, expect to succeed in any part or in all? As well might the country youth expect to be benefited in the merchant's counting-room—as well might the student in addition, suppose because he used a slate that he could do all that can be done on a slate—as a person not used to, and not acquainted with the soil, can suppose himself to excel in agriculture.

What must the farmer do to better himself and farm? Study interestedly, by obtaining information from experienced and skilful agriculturists; by reading and observation; and by a judicious expenditure of labor and money upon the soil; and when he has made his farm what a farm should be, he may expect to be able to live in a better manner than any of his neighbors; and not till then.

When I hear a man raising objections to an agricultural paper, I observe his farm, and am generally sure to find that he is raising very powerful objections to farming, in a very unconscious, and as we say, in a very hereditary, honor-thy-father way. E.

For the New England Farmer.

LAYING DOWN INUNDATED LANDS.

MR. EDITOR:—I am puzzled, somewhat, to know how to treat a piece of land I broke up last fall, and having no one to advise with, I take a subscriber's liberty to request that you will help me out of my difficulty.

The piece of land in question is a part of my meadow (intervale), and has been mowed for a number of years. The soil is rich and light, but overflows every spring, (lying rather low,) so that it is late in the season before I can get on it. My wish is to get it into grass again as soon as possible, after manuring it well. It had a thick, mossy turf before I plowed it, and yielded but a small quantity of fine, miserable grass. I had thought that it would be a good plan to harrow it thoroughly in the spring, then sow on grass seed, and a heavy coat of guano, having no crop from it until I cut the grass again the next year's summer. My object in sowing no grain was, that I might not lessen the strength and vitality I hoped to get from the guano. But I have heard so many conflicting opinions in regard to this manure and the manner of using it, that I am undecided, as yet, as to whether I have chosen the best plan. I could sow oats on the upturned turf in the spring, I suppose, and by plowing it in the fall and manuring heavily with stable manure the next spring, have the ground in pretty good order; but the river washes over it so much, it is so late before I can do anything with it in the spring, and I am so limited in my supply of stable manure, that, all things considered, I am very desirous to lay it down before the water has much time to injure it. And yet I want it rich, so that I wont be obliged to disturb it again for some years. If you can tell me what to do, you will much oblige, Yours, respectfully,

Montreal, January, 1858. JOSEPH GOULD.

REMARKS.—We have a ten-acre field in precisely the same condition,—lying on the river's bank, and subject to overflow every spring. Our

plan is this:—to throw the soil into beds fifty or sixty feet in width, so that the water shall flow from a large portion of it as fast as the river falls; then plow and sow with a light seeding of oats, say from six to eight pecks to the acre, and cut them at the proper season for fodder. The growth of oats will keep the weeds down, and shade and protect the young and tender grass, and will not greatly exhaust the land if cut just as the seed is fairly formed. Or, you may sow oats without grass seed,—cut them for fodder, plow and manure the land immediately, early in August if you can, and then sow such grass seed as you like, but we shall get a plentiful intermixture of clover for a year or two if we can.

If the field is dressed with a fine, rich compost, so that the young shoots of the grass seed may readily find something nourishing to lay hold of, and the seed is sown in August, the grass will become so thoroughly rooted and established before the autumnal overflows, as to resist the action of the water, unless the currcnt over it is pretty strong. Fragments of ice may occasionally kill out spots of the grass, but the old sward is equally liable, and early attention must be given in the spring to correct such places.

U. S. AGRICULTURAL SOCIETY.

We have already given an outline of the proceedings of this society at its late session at Washington. But in the *National Intelligencer* we find a more minute account of the action of the society upon the resignation of President WILDER, which will be read with interest by the large number of friends of that gentleman throughout New England. It is as follows:

Mr. Wager, of New York, offered the resolutions following, which were unanimously adopted:

Whereas, the Hon. Marshall P. Wilder, of Massachusetts, who has for years so eminently distinguished himself by his exertions in promoting the cause of terra-culture, has declined a further re-election to the office of President of this society, which he has filled since its creation with ability, industry and outlay of his private means; therefore

Resolved, That his name be placed on the roll of honorary members of the United States Agricultural Society; and that the Executive Committee are instructed to present him with a suitable testimonial as a mark of appreciation of this society for the energy, time and money which he has expended in advancing its interests, and in raising it to the position which it now occupies.

Resolved, That while the members of this society regret exceedingly that personal considerations constrained him to decline a re-election, they would express their kind regards and most earnest desires for his future happiness.

The President, in reply, said:

Gentlemen, I thank you most sincerely for this renewed testimonial of esteem and affection, as expressed in the words of the resolutions that have just been adopted.

Endowed from my youth with a love of rural life and of rural taste, I have but obeyed the instincts of my nature in devoting such time, ability and means as I could command to the cultivation of the earth.

In taking the incipient measures towards the formation of this society, in all my efforts for its advancement, and in whatever I have been enabled to do for the promotion of the general cause, I have only been following the leadings of Providence and the inspirations of my own mind.

The duties of your presiding officer, I need not inform you, have frequently been perplexing and arduous, and their faithful discharge attended with difficulty and delicacy; but your kindness and co-operation has shared the burden with me, and I shall ever regard my connection with you and the many friendships I have here formed, as among the most delightful circumstances in my life.

On retiring from the position which I have so long occupied, I pray you, therefore, to accept the assurances of my high consideration and regard, and of my undiminished interest in each of you personally, and in the future prosperity of the United States Agricultural Society. Long may it live to be an honor and blessing to our country, and may its last days be its best days!

At a meeting of the Executive Committee, held the evening previous to the last day of the session, they unanimously passed the following resolution, which was offered by Mr. WAGER, of New York:

Resolved, That in obedience to instructions from the society, the Executive Committee request the Hon. Henry Wager to inform the Hon. Marshall P. Wilder that the sum of $250 is placed at his disposal for the purchase of such a testimonial as may be to him most acceptable.

Mr. BURGWYN, of North Carolina, addressed the society in support of the resolution of the Executive Committee, and commented in warm terms on the united energy, intelligence, liberality and public spirit which had marked the official connection of Mr. Wilder with the society.

The CHAIR united in testifying to the eminent services rendered by his predecessor in the presidency.

After which, on motion of Mr. BURGWYN, the resolution of the Executive Committee was adopted unanimously and by acclamation.

Ex-President WILDER replied to the vote thus taken, and feelingly returned his acknowledgments for the very kind treatment he had received at the hands of his fellow-members. He wished to take the opportunity to give testimony to the zealous co-operation he had experienced from members and officers of the society, who had with him borne the burden and heat of the day. He spoke in the most flattering terms of the zeal and ability of the Secretary, Maj. BEN: PERLEY POORE, whose "steady, minute and untiring attention to duty, aided as it has been by bodily powers and force not granted to many men, had combined to make him a model Secretary." He also paid merited compliments to "the fidelity and industry of the Treasurer of the society, Maj. B. B. FRENCH. We are glad to record the clos-

ing events of the energetic and prosperous career of the first President of the U. S. Agricultural Society.

For the New England Farmer.

WITCH GRASS, (TRITICUM REPENS.)

MESSRS. EDITORS:—Much has been said and written within the last few years upon the subject of witch, couch, quitch, or phin grass, as it is variously termed. Our most eminent writers upon grasses condemn it. Dr. Darlington says, "It is important to keep our farms as clear of it as possible." Mr. Flint, in his work on grasses, says, "It is important to destroy it if possible." And Mr. Lapham, in his treatise upon the grasses of Wisconsin, calls it "a mere pest, of no use for food of cattle."

Although reluctant to dissent from an opinion so strongly supported, I yet hesitate a little in adopting it. I have known something of this grass for a good while, and have come to regard it with less aversion than the writers above quoted express for it. While I do not consider it a desirable acquisition to a farm of a stony soil, yet upon one free of rocks, it is not very much to be dreaded, to say the least. Like very many other things, it has some good and some undesirable qualities. Let us look for a moment at some of the latter.

It is objected to it, that, where it grows alone upon very rich soil, it frequently turns yellow at the bottom, and falls down before it is ripe, but I have never known this to occur when it was mixed to a considerable degree with other grasses. It is also objected that when suffered to stand a little too long before cutting, it grows light colored near the ground, and the stalk becomes hollow, woody and brittle. This grass flowers usually during the first half of July, and if cut when in blossom, or quite soon after, this evil is not experienced. It is furthermore urged, that when witch grass is upon the land, there will be hard hoeing. Upon land free of rocks, deep plowing with a complete inversion of the sod in breaking up the ground, and a sharp cultivator run both lengthwise and across through the rows and followed by a sharp hoe, obviate this objection. Thus much against it.

Can anything be said in its favor? I think so. It will grow luxuriantly where no other grass half as good will grow at all. Upon many of the low intervals of the Merrimack, which are annually flooded and oftentimes covered with sand to the depth of one, two, three, and occasionally even five and six inches in a single year, this grass seems to enjoy life, and yields a good burden of hay. If its roots are in the ground when it is laid down to grass with a grain crop, there is certain assurance of a tolerable crop of hay the following year. If the herds grass, red top, clover, or whatever other seed is sown, fail to appear, the witch grass will not. These grasses, too, will be fully as likely to live as in its absence, for this attains a considerable growth by the time the grain is harvested, and affords shelter to the tender blades of the other grasses left exposed to the fierce August sun, by the removal of the grain in whose shelter they have been hitherto nurtured.

But as to the value and quality of the hay, how is it? If cut early, and well cured, it is good. It comes out of the barn in winter, heavy, green in color and fragrant. Cattle and horses eat it with a relish and grow fat upon it. Its price in this market, when of good quality and mingled to some extent with other grasses, is about the same as herds grass. When free of any admixture of herds grass and red-top, it is generally of a somewhat coarser and inferior quality, and sells at a less price.

I have said thus much of this grass as a consolation to any farmer who may find it appearing upon his farm. If it has spread over any considerable part of it, any fond hopes of its extermination are vain. For although physically possible, its destruction is practically impossible. Neither will it avail anything to be frightened at it. An acquaintance with its habits, which may be soon formed, will suggest the best mode of treating it. It has frequently been a policy of late to conciliate any strong opponent who could not be otherwise silenced, and thereby gain his support. This is the true way to deal with witch grass, which, managed as it may be, will prove not a curse or a pest, but a blessing and a source of wealth. PENNY-COOK.

Concord, N. H., Jan. 12, 1858.

THE FARMER.

What a sovereign man is the intelligent, industrious farmer! Within his own realm of earth, he wields a sceptre to which all must bend. The balance of the world's life and comfort he holds in his stalwart hand. Neither courts, nor camps, nor armies, nor fleets, can exist without his aid. He is the feeder—aye, and the garmenter, virtually—of the race. Cities spring from the traffic in the products of his industry. Commerce is born at his bequest. Of the State he is the "first Estate." Lord of the land, no man has firmer hold of the essential title of nobility. And he need be no plodder because he is a farmer. The day is past when the soil tiller was confounded with the clod turned by his plow. The soil is his servitor: he smites it, and lo! the harvest comes forth. The hoe and the sickle make him music braver than dulcimers, and sound the march of a triumph, grand as it is peaceful and blessed. But he is not forever in the furrow. For him are broadest fields of study—fairest fields of delight. For him are honors linked to beauties and wisdoms; for him, periods of communion and rapture, of which the birds, the flowers, the streams, the stars, and all wondrous things of the universe, may bear witness. A brave man art thou, wielder of the mallet and plane; and thou, skilful worker of webs; and thou, deviser of all machines whereby the labor of man's hand is speeded or abridged. He is master of the needfulest of toils, and the most serviceable products. He can live without you, but you cannot exist for a day without him. Honor to the farmer; may his sphere widen and his stature be exalted. And honor to all honest toil, for of such are the fruits that form the crowning glories of the world.—*New York Ledger.*

☞ A bill has been introduced into the New York Legislature for the incorporation of the Central American Industrial Emigration Company, with a capital of $300,000.

A STABLE FOR CITY OR VILLAGE USE.

We have been allowed to look at the sheets, in advance of publication, of a new work entitled "*The Farmer's and Mechanic's Practical Architect and Guide in Rural Economy.* By J. H. HAMMOND, Architect. Boston: John P. Jewett & Co., Publishers." This is a work by a practical man,—a carpenter,—who has made it, as it were, because he couldn't help it,—made it in the course of his business to satisfy the wants that were continually pressing upon him.

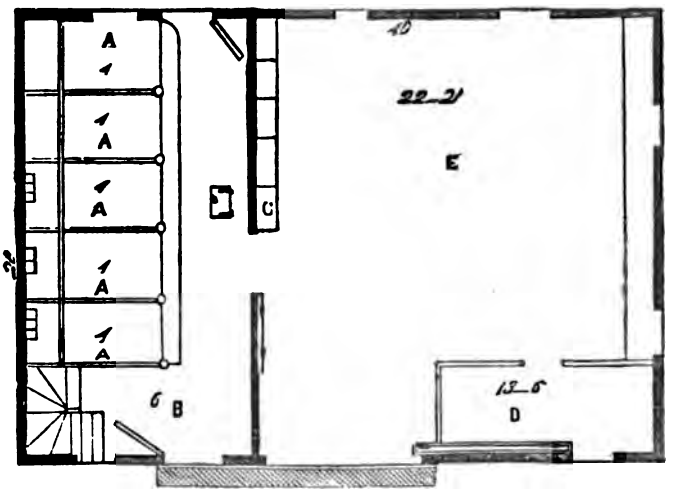
We will only say, now, that it appears to us that this book presents designs *for the million*, that it is a work for popular use, and will afford numerous suggestions, which will be carried out by that class of our people who desire, and are able to erect, comfortable and even elegant residences, but not of a very costly character. We give one of the designs to-day, and when we see the whole work, shall find occasion to speak of it again.

This design exhibits a neat and convenient stable, adapted to the wants of those who wish to keep two or three horses and a cow or two. It contains five apartments, or stalls, with a wide passage behind the horses, and a slide-door between the stable and carriage-room. The carriage-room is ample enough to admit three or four carriages. It contains also a harness-room, which is indispensable to every stable, to preserve the harness from the dust that is constantly accumulating. This building also contains a large hay loft, capable of holding ten or twelve tons of hay. The cupola over the ventilator gives the building a neat and finished appearance. A stable of this description may be made an ornamental object, but its convenience depends almost as much on its location as its construction. The proper location must depend on the relative position of surrounding objects. It is impossible to offer advice which would apply to all circumstances; a few hints, however, may not be useless.

All stables should be so situated as to allow sufficient space for driving in and out and for turning. If practicable, they should be on the north and north-east side of the house, because when the wind blows from these points, the doors and windows of the dwelling-house are usually closed, even in summer. The inmates, therefore, by this arrangement, avoid the effluvia from the stable.

Very few stable cellars are properly ventilated, and some have no ventilation at all, except one opening or door, which is closed in cold weather. There ought to be at least, four good-sized windows equally distributed, and in opposite places, to produce a current of air in all parts of the cel-

PLAN.



A A A A A, Stalls. B, Passage behind the Stalls. C, Ventilating Pipe. D, Harness Room. E, Carriage Room.

lar, each window containing four or eight lights, of nine by twelve glass; the sash hinged for the convenience of opening at pleasure, inside or out.

This stable is 38 by 28 feet on the ground; first story nine feet six inches in the clear; the hay loft nine feet. A ventilating tube from the cellar to the cupola, twelve by sixteen inches; also an opening back of the stalls at the top into the ventilating tube of suitable size.

If the stable is a thorough-built one it will require two or more small windows, near the floor, to supply fresh air constantly in all mild weather.

The estimated cost of this stable is fifteen hundred dollars.

For the New England Farmer.

A FARMERS' CLUB.

It was my good fortune recently to be present at a meeting of this kind in the good old town of Chicopee. Such a gathering of stalwart men, with brown cheeks and big hands, is seldom seen. If there should ever be a National, or even State, man-show, I trust some of the "river gods" will be present. We have in this valley some as perfect specimens of the *genus homo* as the world affords. They are every inch men, physically, mentally, morally and socially. It is a custom of the club to meet at 3 P. M., to examine stock, buildings, grounds, &c.; to have a plain supper at the house of one of the members, and to spend the evening in the discussion of previously announced topics. As a member recently said, "it is a sort of maternal association."

The subject under discussion was "Farm Implements." The plow was first considered. It was thought by some that the side-hill or swivel plow, would become *the* plow for general use. Its advantages are that it leaves no dead furrows and takes less time of the team in turning around. By others, the double or Michigan plow was considered the best implement. It requires more team, but does better work. A long, sloping share, diminishes the draught, but pulverizes the soil less.

Much is expected of the new plow announced by Nourse, Mason & Co., with its many various mould boards. Every farmer has some favorite instrument. The square hinged harrow, with short wrought iron teeth fastened in their place by a nut, was decided to be the best; the seed-sower with one wheel the best for uneven ground; a corn-planter that will plant in squares a desirable invention; a short handle hoe the best implement for cutting up corn; a shovel branded O. Ames & Son,—a fork made by Partridge, and the best of tools generally, the cheapest in the end for any man. More anon. J. N. B.

THE CONCORD GRAPE.

Not having noticed any account of the fruiting of this new grape in this State, I venture to offer my experience to your horticultural readers.

It fruited with me last season. I allowed it to overbear—a single vine giving me over a half peck of fruit. This reduced the size of the berries.

The bunches were large, very compact, with few imperfect berries. Flavor, very sweet, with little juice, but with a slight *after-taste* of foxiness in the skin. It ripened at least two weeks earlier than the Isabella in the same yard—the Isabellas growing against the side of a wooden house with an eastern exposure—the Concords on a trellis in the open garden.

In quality I think the Concord not quite equal to the *best* Isabellas. In vigor, hardiness, productiveness and ease of propagation the vine cannot be excelled.

These are qualities, which with its early ripening, can hardly fail to render this grape a popular one in this climate.—*Michigan Farmer.*

For the New England Farmer.

LETTER FROM MAJOR FRENCH.

Washington City, Jan. 30, 1858.

MY DEAR BROWN:—I suppose you would like to hear from Washington, and be told how matters and things are progressing in this Federal metropolis, now the light of your countenance is withdrawn from us. We enjoyed your visit exceedingly, and the shadow of your departure cast its gloom over one breakfast at least! I see by your weekly that you posted your readers up pretty well in regard to the agricultural doings at the annual meeting of the U. S. Agricultural Society. You have not, however, said anything of our new President, more than to mention his name, and that he was elected. That hiatus in your account I will endeavor briefly to supply.

Gen. TENCH TILGHMAN is a farmer and a gentleman—most farmers are—and it does not require much knowledge of physiognomy to judge at a glance by his appearance, of the character of the man. Good nature, gentleness, firmness of purpose and high intelligence are as plainly written on his countenance, as this writing of mine is upon this white paper; and the compositors always give me great credit for plain writing! His age is, perhaps, fifty, if anything on the sunny side of that climactric. He is of medium height, of fine figure, and has much of the military air which was *drilled* into him at West Point, where he received his education. He was appointed a Lieutenant of Artillery in 1832, and resigned in the following year. He was U. S. Consul at Turk's Island in 1849, and has been honored by his own State with several offices. He is the grandson of Col. Tilghman, of the revolutionary army, one of Gen. Washington's aids-de-camp, and is a distinguished member of the Cincinnati. He is a gentleman of wealth, and cultivates his large ancestral plantation on the eastern shore of Maryland, near Oxford. He is, in every respect, worthy to succeed our late able, popular and accomplished President, Hon. MARSHALL P. WILDER, to whose indomitable energy and perseverence the U. S. Agricultural Society owes a debt of gratitude which it can never repay.

It is generally known, I believe, that but for Col. Wilder's preremptory declination, he would have again been elected to the office he so admirably filled.

The United States Agricultural Society has started into the present year under glorious auspices. With an energetic and accomplished President, supported as he is by a Vice President of character and influence from every State and Territory, with an Executive Committee which has already evinced a determination to do all in their power to sustain the society, and with that untiring worker, Maj. BEN: PERLEY POORE as the Secretary, with a permanent office established in this city, from which is to be issued a monthly bulletin, what may not the farming community hope, *expect*, indeed, from it? Its days of *hope* are passed, and those of fruition have commenced.

The office of the society, occupied by the Secretary and Treasurer, is in Todd's marble building, adjoining Brown's hotel, on Pennsylvania Avenue; and it is due Mr. Todd, who is from Massachusetts, to say that after placing the rent at a very low rate, he generously deducted fifty dollars as his own contribution.

The society only wants now the hearty co-operation of the farmers of the United States to make it the very corner-stone of the agricultural interests of the country.

When here you made a pretty thorough inspection, I believe, of the improvements now in process at the capitol, and expressed your own admiration of the new hall of the House of Representatives. There is no doubt that so far as hearing is concerned, it is a better room than the old hall. In size it is by far more commodious, and in *gilding and red morocco* it blazes out like a bright coal fire compared with an air-tight stove. In architectural beauty it compares with the noble columns, beautiful ceiling and fine proportions of the old hall about as the Egyptian figures we have seen in stone, (always supposing a little gold leaf added to brighten them up,) with the Venus de Medicis or Apollo Belvidere! It is a great square iron room, gilded. It is enclosed entirely by a suite of surrounding rooms, so that not one particle of God's free air can penetrate it, and it is to be ventilated by an artificial contrivance, like the blower of a steamboat, which is to blow in the air for our conscript fathers to breathe, as soon as the weather becomes so warm as not to need fires in the furnaces. At the present time the air from the furnaces, or rather passing through them, is the article furnished for lung consumption, and through the aid of which the legislative wisdom of the nation makes itself heard. It may work first-rate, and the members may be delighted with their cellar-like hall, but I am one of those who doubt. Time will show.

The work is going on all over the building, notwithstanding it is mid-winter. The weather thus far has been such as not to interfere in any way with out-of-door labor, and some of our days recently have had all the mildness and beauty of October weather.

The new dome is the main outside feature of observation. It has not gained in height any since you saw it, but the enlargement of the base, by the addition all around it of a cast iron casing, is now going on, and as soon as that is completed it will begin to show its magnificence, for it will be a magnificent affair. The only fear is that it will be so large as to overshadow the building—that instead of being a capitol surmounted with a dome, it will be *a dome* with a capitol for its foundation!

The Treasury and Post Office extensions are rapidly progressing. The city Post Office has recently been moved into the latter, and is so arranged as to be as complete and convenient as it is possible for a Post Office to be. It is highly creditable to all who have had the control of building and arranging it. It is pleasant to see these things going on here, for although silent, they outweigh many fold all the clamor and rhodomantade now so rife against the perpetuity of the Union. They illustrate perfectly the old adage, "actions speak louder than words."

The political horizon, so far as regards Kansas, is yet cloudy. There are some bright spots, however, which give promise of a general clearing up ere long. I was gratified to see in this morning's *National Intelligencer* a candid and impartial statement from Gov. Stanton, who has just returned from the Territory, placing things in their true light, for which he is entitled to the thanks

of the people, and which, it seems to me, must have a great effect in bringing about an amicable adjustment of the Kansas difficulties. It shows conclusively that those difficulties have been occasioned by the enormous frauds attempted by the pro-slaveryites in that Territory.

We have had here during the past week a singing party, composed of some thirty or forty persons from Reading, Mass., who style themselves "*The Old Folks.*" They dress in costumes from one to two hundred years ago, and sing mostly the old music that you and I heard when we were children—we wont mention how long ago that was, lest we should be ranked with the "old folks." They have given several concerts at the Odd Fellow's Hall, a large room capable of seating at least 1200 people, which has been literally crammed, and hundreds have left the door, there being no room inside for them. I believe the performers compose a musical class, taught by a Mr. Kemp, of Reading, formerly of Boston, who is styled in the programme "Grandfather Kemp." He is a very pleasant, gentlemanly man, and manages his class most admirably. I attended the Thursday evening concert, and was very much interested in the performance. It was really refreshing to hear sung, in perfect time and tune, and by some of the best voices I have ever heard, "Denmark," "Majesty," "Shurburne," "New Jerusalem," &c.

They also sung, with great effect, "The Dying Christian," "Strike the Cymbal," "The Star Spangled Banner" and the Marseilles Hymn. When "Coronation" was sung, "Grandfather Kemp" invited the audience to rise and join them; he said he wanted every person in the room to sing. The request was complied with so far as rising was concerned, and I should think every one who could sound a musical note, put in his or her share, for such an

"All hail the power of Jesus' name,"

I have never heard before, and hardly expect ever to hear again! They closed their performance by singing, at the special request of the audience, better than I had ever heard it sung before, "Home, Sweet Home." The whole performance was most admirable, and I was carried back—no matter how many years—sometimes laughing and sometimes—not *laughing!* I have formed the acquaintance of Mr. Kemp, and some others of the company, and they are true Yankee honest men and women, and an honor to old Reading and the old Commonwealth; God bless them!

I have not said much about farming in this letter, but as soon as spring opens, and I commence my spring work, look out for a letter about my three-quarters-of-an-acre plantation.

Your faithful friend,

B. B. FRENCH.

HOME ON THE FARM.

The farm preserves the family in its integrity. The home has in that charming word, and that more charming thing, the fireside; around which parents and children gather, and where the bright and cheerful blaze upon the hearth is but a true type of the flame of love that glows in every heart. The parents have been drawn together, not by sordid motives of wealth, or by the ambitious desire of social display, but for the personal qualities seen in each other. The glory of that fireside to the husband is that the wife is there, and to the wife that he is there, who is head of the woman and the band in that home circle. Here they gather at morning, and at noon. Their board is almost always surrounded by the same circle. Here they spend the long winter evenings together, enlivened with the school-books of children, the newspapers and journals and works of history and science. A constant homogeneous influence goes forth from this circle to the hearts that are moulding there. Parental vigilance guards the young against wicked companions. If the religious influences are right in that home, they will grow up to be good citizens, to be the pillars of society, wherever their lots may be cast. The sons follow the business of their father as soon as their labors are available. They are with him in the field, and by the way, and at home. They form industrious habits, and are prepared for the responsibilities of life.—*American Journal of Education.*

For the New England Farmer.

ILLUSTRATIONS—POCKET PRINTING MACHINES—A MEAT-CUTTER.

I am very happy to see in the *Farmer* notices of many valuable inventions, and drawings of many of them. While some of your more suspicious subscribers are inclined to the belief that you receive pay for so doing, and thereby save the proprietor or inventor the cost of advertising, and at the same time secure the more favorable notice consequent upon an editorial puff, the most of us, who are not always looking behind the faces of probabilities for the chance of seeing a possibility, look at them as given to us at a cost and trouble on your part, for which your only compensation is the satisfaction of benefiting the numerous readers of the *Farmer*, whose inland location and home industry prevent them from going abroad to examine the new works of inventive minds.

But let me request a little more full explanation of the more complicated machines as they appear in your columns, that I may be able to understand their operations without re-inventing the same in my imagination.

I recently heard of a pocket printing machine—who can give us more light upon the subject?

You also gave us a drawing of a meat-cutter—probably simple, but we don't all u ·rstand its operation.

If I am not already taking too much of your space, I will describe a meat cutter already in the hands of every farmer, viz.; a board two feet long and wide enough to hold your meat, Jack Frost, and a common plane. Let your meat be packed or piled closely on the board, let Jack freeze it tight, and then, with the plane, in a few minutes one can chop sausage or pie meat for a regiment; and my word for it, you will not find "square meat" upon the table. P. J.

Middlesex, Vt., 1858.

REMARKS.—The suppositions of our correspondent in regard to the manner of our publishing cuts in the *Farmer*, are correct. The engravings which we give our readers are an ex-

pense to us of some hundreds of dollars yearly. We are always glad to publish engravings of any machine which we think our readers will be benefited by, but we uniformly refuse to give any *puff*, or anything more than a fair description of the implement illustrated, so as to make it plain to the reader. All matter for which we receive pay is placed under its proper head, in our advertising columns.

Of the machines of which our correspondent inquires we can say but little. The pocket printing machine is the invention of a Vermont mechanic, and as the patent is not secured, he does right to keep any very definite description of it from the public. Our examination of it has convinced us that it is practicable, and would be highly useful, and we hope to see it prominently before the public, as soon as the inventor thinks he has brought it to a satisfactory state of perfection.

The meat cutter is very simple. Pins set in a spiral row on a cylinder, which is turned by a crank, carry the meat against rows of knives between which the pins pass while the meat is cut into small particles. They can be found almost anywhere where agricultural implements are kept. The plane and frost are good, but the latter cannot be depended upon.

For the New England Farmer.

SURE PREVENTION OF HARD TIMES.

There is a family in the heart of this Commonwealth, (not thirty miles from Boston,) of the highest respectability and the most decidedly Christian character, whose income and expenditures for the last few years have been as will appear in the statements which follow:

Deacon A. is a laborer—a farmer—in the employ, by the day or the month, (for I am uncertain which,) of a near neighbor. The receipts from this source were,

For the year ending		March 31,	1853	$259,48
"	"	"	1854	287,54
"	"	"	1855	286,65
"	"	"	1856	290,80
"	"	"	1857	297,11

As he has no land of his own—and not so much, I believe, as the smallest domestic animal, the avails of his labor, as above, are his principal reliable resource. He has, however, during the above five years, received—partly by donation, and partly as the reward of various services performed by himself or his family—from $80 to $85 a year, besides. Placing this at $85—for I do not wish to exceed the limits of the strictest truth—and adding it to the sum total of the above, and we have an aggregate income, for the five years, of $1946,58 or an average income, for each year, of $389,31; or a little over a dollar a day.

It is next to be observed that on this comparatively small income Dea. A. has not only well supported his family, but saved something from it for the future. This saving or laying up has averaged $45 a year. Deducted from the above, a yearly balance remains of $344,31.

Then it is to be observed still further, that his rent for one-half of a plain, but ample country dwelling, has averaged $39, yearly; his life-insurance about $37; and his contributions for religious and charitable purposes not far from $22. The aggregate of these last are $98; deducted from the above yearly resources of $344,31 would leave $246,31; or, for the support of a family, about *sixty-seven cents* a day. Now his family consists of himself, his wife and four children—the eldest in his eighth year. They are all, it is true, comparatively healthy. As an evidence of which, their whole expense for physicians and medicine, during the five years, has been but $1,50.

How have they been sustained on means so limited?

1. They have used, as they say, only one pound of coffee, half a pound of tea, three pounds of saleratus and one and a half pounds of cream of tartar a year—and no fermented or distilled liquors or tobacco.

2. For articles of luxury, or *almost* luxury, they have also spent comparatively little; only $12, yearly, for sugar and molasses; $12 to $15 for butter; nothing, or next to nothing, for lard, eggs or cheese; and only $15 for animal food. Their living has been, (except milk, at an expense of $18 or $20 yearly, and fruit,) chiefly bread-stuffs and potatoes. These and milk have cost them from $80 to $100 yearly. In winter, however, they use much corn, and of wheat, during that season, comparatively little. It is said that the rigging of a ship cost more than the hull; and that, in like manner, the non-essentials in the family cost more than the essentials. But the rule is reversed in the family of Deacon A. The principal expenditures, so far as food and drink are concerned, though there has been nothing mean or stinted about it, have been for that which is truly the staff of life; while the expenditure for luxuries and semi-luxuries, though quite enough for the best purposes of health, and even for the highest gustatory enjoyment, have been comparatively trifling.

I might say much more on this interesting case, but a word to the wise, in a matter of so much importance, ought to be sufficient for my present purpose; which is to set the friends of Christ and of His religion to thinking.

W. A. A.

THE REVULSION IN BUSINESS.

It is wonderful how the effects of the recent revulsion in business have been felt in every department of industry throughout the land—how they have invaded every art, trade and calling, and left their impress upon them all. We will not attempt to show how they have decimated the profits of the merchant and manufacturer, kept travellers and merchandize from railroads, and ships rotting at the wharves, but state a simple instance to show how minute and searching their ramifications have been. A market gardener told us the other day, that last year, 1856, he got four cents a pound for squashes, and sold large quantities at that price; that this year he had sold the same quality for *one cent* a pound, and that the de-

mand was quite limited at that low rate! And he imputed this entirely *to the revulsion in business!* He enumerated other changes equally as striking.

In calling attention to the effects of this revulsion, our intention was to speak more directly of our own affairs. We suppose the newspapers of the country have not escaped entirely unscathed; indeed, we have heard that some of them have been sadly diminished by the revulsion. We deplore the error that leads to such results—for no farmer, however intelligent and thrifty he may be, *can afford* to be without at least one good agricultural paper. We receive it, therefore, as an evidence of appreciation of our labors, that throughout this fiery ordeal our list has decreased only one or two hundred on our weekly edition, and less than many other papers on our monthly issue. This was unexpected, is encouraging, and will stimulate to renewed efforts to return to the reader with ample usury all we may receive from him.

For the New England Farmer.

ANALYSIS OF SOIL.

A few years since, we were encouraged to hope that the philosopher's stone of culture, had been found in these processes. I remember to have heard a learned gentleman (professor I think he styled himself, though I never could learn, where or of what) say that he then had on hand more than a hundred parcels of soils, from so many different localities, to be analyzed, and that he should be able to furnish certificates of their peculiar productive qualities. I have since heard it averred, that he was never known to make an analysis of a single parcel himself—always trusting these operations, to the young men who were studying under his direction. I cannot speak as to the truth of these assertions, though I suspect there is much more reason to believe in his ignorance than in his wisdom. On one occasion I heard him discourse at length, and my conclusion was that he knew much less than he thought he did.

Of late, I have seen it intimated in journals of character most reliable, that no reliance at all can be placed on analysis, that can be matured in a day or even in a week; and that nine out of ten of these pretended analyses were neither more nor less than humbugs. If this be so, Mr. Editor, the people should know it. Where is our Board of Agriculture, with its learned Secretary? don't they know? Where is the State essayer, with his accumulated science? We farmers want to know whether science and scientific men can be reli d on? If I do not mistake, you yourself have occasionally hinted that "all is not gold that glitters." INQUIRER.

Jan. 30, 1858.

REMARKS.—Ay, ay, sir, we long ago learned the truth of that homely old saying,—and it was only at the recent session of the U. S. Agricultural Society at Washington, that we heard the learned Dr. ANTISELE denounce in set terms all pretensions, that a reliable analysis of any soil can be made in a day, or a week, or at a cost of five dollars only! Before we left the room where this was uttered, one of the most distinguished chemists of the country stated to us that $25 would hardly pay for a soil analysis, and that some *six weeks* time would be necessary to make it in a proper manner.

For the New England Farmer.

$81.10 INCOME PER COW.

MR. EDITOR:—Will you please insert the following statement of facts, and correct a wrong impression made upon the minds of some of your readers, by the last paragraph in your editorial of Dec. 26, in regard to the amount of hay consumed by my cows. I presume the calculation there made was a mistake, (for even *Editors* sometimes do such things.) My attention was directed to it by the remarks of your correspondent, T. A. S., in the last week's *N. E. Farmer.*

I have weighed the hay, &c., used by my cows, at different times, so that I know nearly how much has been consumed. About one-half the fodder used was corn stover and barley straw, the other half, English hay, meadow hay and rowen, all cut and mixed as stated in your paper, the value of which would not exceed $10 per ton. The price received for my milk last year was 22 cents per can, of eight quarts each, from April 1st to October 1st, and 32 cents per can the other six months of the year. The milk was kept at home at different times, equal to one month, all of which was valued at the lowest price. This was made into butter and cheese and used in the family. No account has been made of the milk used in the family for ordinary purposes. The amount, at those prices, was, for each of the seven cows $81,10.

Cost of keeping at my estimate, as follows:

20 pounds of fodder per day for 213 days, at $10 per ton	$21,30
6½ cents worth of meal or shorts a day for the same time	13,32
Roots, mostly ruta-bagas	10,00
Pasturing and green corn fodder the other 152 days, valued at 75 cents per week	16,50
Cost of keeping each cow	$61,12
Profit on each cow	19,98

I should not have troubled you with this communication, had it not been for the purpose of correcting the inference drawn from your remarks, that my cows live and do well on twelve pounds of hay per day. ELMER BRIGHAM.

Westboro', Feb. 2, 1858.

REMARKS.—We wish all our errors could be corrected as promptly and easily as this. We cannot help thinking, however, that *we are nearer what ought to be the fact,* than our correspondent is. Twenty pounds of hay each day for a cow, and meal beside! Why, 'tis a mountain of fodder! *Fourteen* pounds of hay a day is all we give a twelve-hundred horse, with a little meal, and work him hard at that. We were in a stable the other day, where 400 horses are kept, and they were in excellent condition, too, and all the

hay they eat in 24 hours is barely *seven pounds!* and coarse oat and corn meal enough to make it up to 20 pounds—just as many pounds as you give one cow; your cow lies down, sleeps, chews her cud, has a good time generally, and only produces you a little milk, while the horses of which we speak perform prodigies of labor every day, in hauling all sorts of human beings up and down Broadway, New York. We are inclined to believe that when the *true mode* of feeding neat stock is ascertained, 12 pounds of good hay and 6 cents' worth of corn meal will produce results as good as those realized from your more liberal feeding at present. We thank you for correcting our error, and when we next listen to your interesting story, hope we shall not be so near half-frozen as when we heard the last.

IN DEBT FOR HIS FARM.

This is the case with many throughout the length and breadth of the land. Not having all the needful cash on hand to purchase their farms at once, they paid what they could, and gave a mortgage for the remainder. Very well. They now have a powerful motive to industry. Every dollar saved is at least as good as one earned, and every dollar earned is a new step towards independence. From year to year, the incumbrance grows a little lighter, and the prospect of a competence a little brighter. But some tell us that the good time is a long while in coming; they do not make farming as profitable as they could wish; can we help them by any suggestions?

We reply that we know of no royal road to riches through agriculture more than in other pursuits. But we are assured that much can be gained by farming in an intelligent and thorough manner. It will not do to work at random, or by rote, even though one work like a slave. It will not do to work with poor and insufficient implements. It will not do to waste time and strength and manure on wet land, when it ought to be drained. It will not pay off the debt, to let the manure heap waste its virtues in the sun and rain. In short, it will not answer to labor hard and hoard with one hand, while wasting with the other.

But we cannot go into details on this subject; it would only be rehearsing the lessons we have so long and so largely taught in our columns heretofore. We can say, however, most truthfully, that one of the best ways to learn how to reduce the farm debt rapidly, will be to read one or more of the leading agricultural journals. They give instructions in economy; they teach how to make the most of a little; they abound in facts, notes of experience and observation; in short, they teach how to farm in the best and most profitable manner. A little money and thinking so invested will yield the most ample returns. In our own experience, we remember a single hint obtained from an agricultural paper, in regard to putting in a grain crop, which was clearly worth sixty-two dollars the same year. This and similar results on our own farm and on others, more than anything else, led us to our present field of labor. We are confident that no one can take and read even the poorest agricultural paper in the country, without deriving hints and suggestions therefrom, which will in the long run pay him enough to meet the expense of a hundred annual subscriptions.—*American Agriculturist.*

EXTRACTS AND REPLIES.

TORTURING A HORSE.

It is cruel to fasten a horse's head in any position, even a natural one, much more at an unnatural and uneasy elevation. Yet many persons do not like to see a horse standing, drawing or travelling, unless his head is raised to a fashionable or high position. It is very fatiguing to the horse to have the cords of his neck thus cramped for hours, or a day at a time. Besides, he cannot travel so easily, or draw so much with his head curbed or fastened. And if he trips or stumbles, he cannot gain his footing so easily as when his head is free.

If persons desire a short rein or check for their horses, they should be made so as to be as easy as possible for the horse, for it is unmerciful and cruel to afflict and punish a horse thus for no offence or fault. The bridle rein should have elastics in it, one upon each side, so as to yield when the horse trips, or strains to draw a load. P.

REMARKS.—Any person whose attention has been called to the subject, and who still persists in the use of a *tight check rein*, ought to have his own head placed in a similar position to that to which he has cruelly subjected that of the horse. If we were the "*Grand Sultan*," every man who torments his horse with a check rein, should hold out both arms at right angles with his body for an hour at a time once in each twenty-four hours, as long as he continued the use of the check rein.

THE YELLOW LOCUST.

Please inform me when and how Yellow Locust seed should be sown? PHILIP COLLINS.

Guilford Centre, Vt., 1858.

REMARKS.—The seeds of the Yellow Locust should be sown in a rich, free loam, an inch or two apart every way, and covered with light soil from a quarter to half an inch deep. The seeds may be sown in the autumn or spring, and under favorable circumstances, the plants will be from 2 ft. to 4 ft. high the following autumn; the largest may then be removed to where they are to remain, and the others transplanted into nursery lines. If the seeds are not sown in the autumn it would be better to keep them in the pods until spring, but in a dry state. See monthly *Farmer* for 1854, pp. 265, 479, 482.

SPRING SADDLES.

There has been a patent granted for spring riding saddles. It would be well if the patent should be applied to the dray or cart horse saddle.—

Good elliptic springs between two metallic saddle-trees would save the horse from the jars of the pavement, and the present unrelieved crushing effects of a load. The under saddle-plate or tree could have interstices in it for ventilation. The padding of it would not be difficult, with such spaces open for the cool air to touch the back beneath the saddle. By a suitable contrivance a rod would shove up the weight at any time pressing upon the back of the horse. P.

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"GOD SENDS MEATS AND THE DEVIL SENDS COOKS."

Do any of your readers know, Mr. Editor, the origin of this saying? It is one of long standing; and it is found in more than one language.

And, what is vastly more important, do you or your readers know what is its meaning? Meaning it has, undoubtedly; its meaning may be important; it is my opinion it is so. But before I venture any comments on it, I prefer to await a reply from yourself, or from some of your intelligent readers, male or female. May I not hope for an early response—at least, to my first inquiry? W. A. A.

REMARKS.—What its meaning is, my dear sir? Yes, every time we sit at the table. God did send meats, and they are good. He also sent *medicines*, and they are good in their place. But something, or somebody, whether "Old Cloots" or not, we don't know, has induced our cooks, all over the land, to *mix the medicines with the meats*, and it makes a compound too villanous "to take." Why, sir, half the trade of the apothecary has gone into the grocer's hands. It is difficult now to get a dish of *meat*, even, to say nothing of pies and puddings, that is unpolluted with some sort of drug. There is scarcely anything that needs reformation more than our present modes of cooking.

—

CULTURE OF INDIAN CORN.

I am truly sorry to learn from your venerable Plymouth correspondent, that the culture of this most reliable and valuable crop of our fields is falling off. I had hoped, under the influence of the improved varieties introduced by himself and others, and the multiplication of ears upon the stock, by artistic arrangement in the selection of seeds, that the farmers of Massachusetts would have found their best interests advanced by sticking closely to this crop. Instead of introducing "new crops," Chinese sugar cane, for instance, if they would do what they might to perfect their own johnny-cakes, they would better their own and their children's condition. I have heard, years ago, of a class of persons who were constantly looking after "some new thing," but I never heard that they were to be regarded as the better class of the community; I would much rather train under the banner of the justly styled "model farmer of Plymouth," though I confess I do not like the Plymouth mode of measurement, by weighing green in the ear. Give me the standard bushel, well matured, fit to be ground; this alone will satisfy me. P.

Feb. 8, 1858.

CRANBERRIES.

MR. EDITOR:—Will you, or some cultivator of cranberries, oblige by replying to the following:

I have removed the muck, &c., from a piece of low land down to a hard sand pan mixed with a little clay. For certain purposes, I intend to flow this in winter as a pond. In case the water dries away in summer, my plan is to plant it with cranberries. The place can be flowed or drained at pleasure, except in a dry time; by one year's freezing and thawing, and other means of pulverizing, I have no doubt a friable soil can be made. The questions are, will cranberries do well in such a soil? Can they with safety or benefit be flowed permanently during cold weather? Or will they rot by excluding air so long?

R——y.

REMARKS.—There are many valuable facts among Massachusetts men, on this subject, that ought to be more generally known, and we hope some of them will be given in reply to the inquiries of R——y. We think cranberry plants may be flowed from November to April without injury, as we have observed a meadow for more than twenty years that has been regularly flowed all through the winter, which has yielded a good crop of cranberries during that time, and continued to do so as late as last autumn. It has been flowed purposely, with the *intention of preserving the plants!* Judging from this example, there can be no doubt but that the plants receive benefit—at least, protection—from the water, and will not rot when thus immersed.

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U. S. AGRICULTURAL SOCIETY.

Won't you be good enough to publish, in full, the proceedings of the late annual meeting of the U. S. Agricultural Society, in your next. Many of your subscribers in this place would like to see them in print. H. H. HUNTLEY.

REMARKS.—We have already given an outline of said proceedings; to publish the whole would occupy our columns for some weeks to come. We can fill our sheet more profitably to the general reader, than with the long speeches made on that occasion.

—

LICE ON CATTLE.

The best remedy for lice on cattle or ticks on sheep, is a little sulphur, mixed with salt or a little meal. It is less trouble than grease, and I have found it much more effective.

Athens, Pa., Jan., 1858. C. THURSTON.

—

DIRECTIONS FOR SETTING POSTS.

Dig a hole two feet in diameter, and four feet deep; set the post in the centre, and fill with stone 18 inches, then one foot of tan, or fine chips, and fill up with gravel or coarse sand and tamp well.

I have found by experience that posts set in this way will stand, even in a clay soil, and will not be thrown out by the frost, which is the main difficulty to overcome; it is a very essential point, not only for the practicability, but for the durability of a gate of any kind.

L. D. WOODBURY.

CHARCOAL DUST IN APPLE ORCHARDS.

Will you be kind enough to state how charcoal dust may be best used in the apple orchard? also, whether, in your opinion, said fertilizer, in consequence of the large per centage of carbonic acid contained in the apple (36 or 37 per cent.,) is not peculiarly adapted to the purpose? By so doing you will confer a favor upon many

SUBSCRIBERS AND READERS.

Boston, February, 1858.

REMARKS.—We have never given special attention to this particular point—but have long observed that grass and bushes grow with great thrift on and near old charcoal pits. There is no doubt, however, on our mind, that charcoal dust in an apple orchard would be useful, not merely of itself, but as *receiving* fertilizing matters from the atmosphere and holding them in readiness for the foraging roots of the trees.

—

WINTER BUTTER.

A few days since, I received from our old friend, Sheldon, of W., a box of about 20 pounds of winter butter, as delicate, pure and nice as any butter that I ever saw. It keeps as firm and hard as a brick. I presume it was the product of his premium cow. A brief description of the process by which this butter was made, by the ladies who made it, (for be it known there are ladies on farms as well as in parlors,) would be of more value than any of the speculations of your correspondents. I will guarantee that no *otter* or *carrot juice* was used to color this butter—it needed no such artificial appliances—but, like woman herself, is, "when unadorned, adorned the most."

—

MANURES—BEANS—CORN FODDER—CORN ON MUCK-LAND.

It gives me pleasure to hear from those correspondents of your paper who are warning the tillers of the soil of the (so called) fertilizers, which many are duped by purchasing. Most farmers here have been induced to try some one of the famed fertilizers, and, like myself, find that there are none so profitable as those that every farmer can make on his own farm.

That which can be made in the hog-yard by carting in turf, muck and refuse hay, during the summer, while the pigs which I am to fatten in the fall are made to work in the yard, will convert its contents into good manure in sufficient quantity for a piece of land upon which I raise enough corn and roots to fatten those who take their place, and to raise beans to use with the pork.

I will give your readers an account of money received from one-half pint of beans which were planted in the spring of 1856. I gave for the one-half pint twenty-five cents. Sold five dollars' worth, and saved four quarts for seed. In 1857 I sold what brought me twenty-five dollars, and have one-half bushel for seed. Those last were planted betwixt my squash hills. I also raised a crop of turnips on the spare ground amongst them.

"How does it happen," says my neighbor, "that your cows give a large mess of milk and mine so small? You feed on corn stalks and roots, the same feed which mine have, except mine have English hay part of the time." My reply was, "Examine my fodder, it was cured in the shade, and did not ripen and bleach in the sun and rain."

Will corn grow so as to make it profitable (on muck where it is two feet in depth and well drained) and ripen? S. P. MAYBERY.

Cape Elizabeth, Maine, 1858.

REMARKS.—Corn will undoubtedly do well on such land as you describe, a in hot season.

—

A GOOD COW.

The following statement was handed to me by Jonathan E. Morrill, Esq., Representative from Fall River, who assures me that there is no mistake about it:

"Quantity of milk given by a cow five years old, owned by Ex Mayor Edward P. Buffinton, of Fall River, in twelve months, ending December 15th, 1857.

January 15th	509 quarts.	
February 15th	469 "	
March 15th	430 "	1 pint.
April 15th	470 "	
May 15th	422 "	1 pint.
June 15th	448 "	
July 15th	413 "	1 pint.
August 15th	396 "	
September 15th	372 "	
October 15th	330 "	1 pint.
November 15th	280 "	
December 15th	223 "	
	4764 quarts.	

Or an average of 13 19-365 quarts per day for 365 days, which milk was sold at 6 cents per quart, amounting to $285,84.

Cost of cow	$74,00	
Cost of food	124,45	$198,45
Deducted from		285,84
		$87,39

Net profit in one year, over cost and food. This cow was fed all the time on shorts and hay. She had five bushels of meal during the year.

JAMES F. C. HYDE.

Newton Centre, Feb. 15, 1858.

—

HOW IS BRUSH IN PASTURES TO BE DESTROYED?

I wish to inquire the best method of destroying brush, as I have about 15 acres of pasture land, which is nearly covered with brushes, viz.: barberry, wortleberry, and low or sweet laurel, and the earth about as full of stone, (both great and small,) as an egg is of meat. What I wish to know is, what is the best method to extricate the brush so that I can bring it into feed?

N. E. Middleboro', 1858. BUSH WHACKER.

REMARKS.—A knotty question. Who can answer it?

—

OIL SOAP FOR BORERS.

Two years' experiment has satisfied me of the utility of oil soap on the trunks of trees near the ground for the destruction of the borer. No injury is done the trees by its use in an undiluted state. The best time to use it is the month of June; rub it in well and stop up all the holes.

Sippican, Mass. NATHAN BRIGGS.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Lyons, in France, August 15, 1857.

MY DEAR BROWN:—The city of Lyons, as the children who have recently been at school would know, is on the Rhone, at the confluence of that river with the Saone. My last letter was written near Hendersteg, in Switzerland, and while I am on the subject of geography, I may as well add, for the benefit of all who may read this letter, and have occasion to travel over this region of beauty and grandeur, a sketch of our route to this point. From Hendersteg we came over what is called the German Pass of the Alps. The first letter in the word German, by the way, is hard, but not half so hard as the passage over it, of which I will speak again presently. Next to finding out where one is in this strange land, is the difficulty of pronouncing the names of places, so as to be at all intelligible. From the German, we came down to the baths of Leuk, as the name is usually printed on our maps, from thence to the town of Leuk, on the Rhone, thence down that river, by post-horses through Sian to Montiguy, then across the Alps again over the Tete Noir Pass to Chamouni, at the foot of the famous Mont Blanc, the highest peak of the chain, thence after various excursions to Geneva, by diligence, from Geneva which is on Lake Geneva, also called Lake Lenore, by diligence to a small place called Seyssel, and thence by railway to Lyons, which is called three hundred and twenty-six miles from Paris. My proposed route is from here to Paris, thence to London, from there to the south of Ireland, thence through Ireland to Scotland, and home by way of Liverpool. In our passage yesterday from Geneva here we passed through a corner of Sardinia. Of course, at the entrance of every kingdom, the traveller is subjected to the trouble of showing his passport and of having his baggage examined, to see that he is neither an enemy nor a smuggler. The mode of conducting these operations is quite amusing to all but those who are subjected to it. Our diligence, which is a big kind of a stage-coach, divided into three apartments below, with a sort of chaise-top above, for the accommodation of about twenty-two persons in all, with their baggage, was driven into a shed under a stable, and there we twenty-two people, who had been carefully packed at Geneva like so many herrings in a box, were unpacked, and all our innumerable trunks, bags, boxes, baskets and budgets taken off and spread out on a long platform. Then each owner walked up and unlocked or unstrapped his share of the plunder, and an important military individual of the Sardinian government, rumaged about in the interior among our valuables till he was satisfied, and then we locked up again, and with our baggage were repacked and proceeded. After a few miles, we came to France again, at Seyssel, and there our passports were examined, all our baggage again unstrapped and overhauled, and then we came on to Lyons.

In about two minutes after we were in our hotel, an attendant of some kind came for our passports and took them away for half an hour to send our names to the police, so that the government may know who does their country the honor of visiting it. This precaution is taken everywhere in France, and as often as a traveller changes his boarding-place, the change is recorded in the office of the police. On the whole, I am well pleased with a reason for this precaution, suggested by a French gentleman, on being told that we had no such practice in the United States. "Why," said he, "if a man were travelling alone in your country, and should be murdered or accidentally fall into a lake or river, his friends would never be able to find any trace of him." I have often had similar reflections when journeying alone in England. Going from a railway, perhaps at midnight, alone, with no person within hundreds of miles who knew of my existence, I have been shown into a chamber in the fourth story of the hotel, without even giving my name, and have lain down with the comforting reflection that if I should disappear before morning, by a conflagration of the house, the utmost that could be said of me by way of history or epitaph would be, that a gentleman in number forty-seven was among the missing. As to the examination of your baggage, it is somewhat annoying, especially to ladies, who do not seem to enjoy seeing their private goods and chattels, which they have nicely and smoothly arranged, turned up-side down and inside out by the rude hands of strangers. I carry but one bag, and always hold that open to the inspection with such an air of conscious innocence that through the manifold examinations to which it has been subjected, not a single article has ever been taken out of it. The officer usually puts in a hand, and finding nothing suspicious to the touch, passes along and bestows his more critical attention upon the laces and jewels of some poor lady, whose well-founded apprehension that her dresses will be rumpled, is mistaken for fear of being detected in smuggling.

So much by way of episode; and now let us return to Hendersteg and cross the Gemmi to the baths of Leuk. We set forth on the morning of Monday, the tenth of August, my three Canadian friends and I, in a gentle drizzle of rain, each mounted on a mule, with a man to each mule, a guide besides, and one mule loaded with our baggage, with another man to lead him.

Men, in Switzerland, seem to be of very little importance, so that if you hire a mule i costs no more to have a man go with it than to have the mule without the man. There had been a heavy rain for a day or two previous, and the mountain path was wet and slippery. Four picturesque looking Swiss singers, who were on their way to give a concert at Leuk, started in company with us on foot, and entertained us with an occasional note, somewhere between a song and a howl, and with divers calls to each other which helped to wake the numerous echoes that sleep among the hills. Slowly we crept along the winding path up the face of the mountain, wrapped in all the coats and shawls we could muster, occasionally raising an umbrella when "the storm grew fast and furious." Soon the rain turned to snow, and the whole scene changed to a winter landscape, drear and desolate. We came, after about two hours ascent, to a level, where were two or three huts, and fifty or sixty cattle. The cattle seemed surprised at this visit of winter in August, and were roaming about apparently in search of something better than snow for food. The ground on the top of this ascent, although it was between high ridges, was covered with snow to the depth of four or five inches. We soon came to a halting place, near a small lake or pond, where is a sort of hotel. The prevailing fashion in Switzerland is to build house and barn under one roof, and here the mules were led into one apartment, the guides entered another, and we, the aristocracy of the party, took a third. It seems to be the custom for the guides and muleteers to eat and drink at every place where any supplies can be procured, and although we had been but a little more than two hours on the way, I found them all at their table, which was well supplied with bread and cheese and wine, eating as if they had fasted for a week. These people pay from six to ten cents a bottle for their wine, and they eat nothing but bread and cheese. Meat is a luxury reserved for us foreigners, for which we pay the most extravagant prices. In the matter of wine, our education has improved daily.

The light wines of the country seem really to be the best drink that can be used. Nobody could take enough of them to intoxicate, and in the climate of Switzerland, which is very warm in the valleys, it quenches thirst far better than the snow water which runs from the hills. Travellers, however, especially Americans, who think they must have the best that the land affords, pay dearly for their education. I concluded, early in our travels, that the wine at one franc, or twenty cents a bottle, was just as good as that at four or five times that price. Some of the party, however, were not satisfied, but insisted that there was a marked difference, so I challenged any one of them to distinguish between two kinds, one of which cost just four times as much as the other. The challenge was accepted, and the bottles procured. Our friend turned his back, and I passed him two glasses of wine, which he tasted alternately, and then very confidently announced that the one in his right hand was far superior to the other. The fact was, however, that both glasses came out of the same bottle! And our friend was, to use a slang phrase, decidedly "sold." Upon fairly trying the two bottles, however, we could scarcely discern any difference, and on calling the landlord, he said the highest priced wine had been bottled many years, and the other was drawn from a cask, but that originally they cost the same. It is not generally supposed that light wines improve by much age, and there is no reason why they should more than cider.

These wines, to which I refer, have not apparently half the strength of common cider, although they are pure juice of the grape. A single glass of port or sherry contains more of the intoxicating principle than a pint of this common wine, and English beer, which seems to me the worst beverage ever invented, has more stupefaction in a bottle of it, than could be found in a whole vineyard of Swiss wines. The Swiss, have however, a cheap kind of white brandy which they use, and which produces the same effect as New England rum, that is to say, intoxication and misery.

After an hour's rest, we again mounted and soon came to a larger lake of a mile or more in extent. Here the wind blew furiously, and the snow was whirled in drifts across our path to the depth of two feet, in some places. After about an hour, we were told by the guides to dismount, as nobody is allowed to ride down that side of the pass.

We had, by the way, met an English gentleman and lady making the whole passage on foot, and the lady, with her dress tucked up, and her Alpenstock in hand, was facing the snow-storm rather more manfully than would be pleasant to most ladies, though from observation, it would seem that ladies on these expeditions frequently endure the hardship and fatigue fully as well as the men.

The descent from the Gemmi towards Leuk is wonderful indeed. Standing at the bottom and looking back, you behold a ledge of rocks, some two thousand feet in height, not one smooth face, but divided as it were into several round towers, and in the midst a deep gorge which seems to split the mountain in twain, but winds suddenly out of view, leaving only the precipices on each side in sight; up this rock, perpendicular for the most part, and actually leaning forward in many places, a path has been cut, winding and zigzaging about

one of the towerlike prominences, up to the top of the mountain. It seems actually impossible to believe, as you look at the precipice, that human hands could work out a way, by which a mule or even a human being could ascend, but down the steep descent we walked in safety. In many places the path is cut by drilling and blasting into the solid wall, so that we passed along on a shelf four or five feet in width, with a very steep descent in the path, looking down many hundreds of feet into the chasm below. We were told that a stone would fall, at one point, sixteen hundred feet, before it struck any other object, but that must be an exaggeration. Whatever may be the height, it is a fearful passage for timid persons to make, and the sick who are carried over it to the hot baths below, are blindfolded, that their nerves may not be shaken by the sight of the precipice.

Before arriving at the pass, our senses had been somewhat quickened by an incident which though not unusual, does not befal every party. Passing under a high ridge, we were startled by a crash, like the report of artillery, with echoing reverberations. The mules all stopped and looked wildly up, and the guides shouted "an avalanche! an avalanche!" and for a moment we looked upward in apprehension that it might cross our path; but the sound soon died away, and we proceeded. When we had nearly reached the bottom of the narrow path, we again heard a crash, and soon came a rush of earth and stones pouring over a cliff in front of us, nearly down to the track which lay before us, and scattering with a terrific sound over the slope at the foot. The rain and snow had loosened the earth on the mountains, and caused an unusual tumult for our edification. It seems as if the people of these mountain countries courted destruction in the selection of their homes. Three times has the village at the foot of this pass been overwhelmed and destroyed by avalanches, and yet it is rebuilt, and relying on artificial walls which have been constructed behind the town to stop the impending ruin, they buy and sell, and float in the baths as securely as if in the midst of a prairie.

All along the sides of these mountains, the avalanches have cut their paths. Any slide of earth or rock or snow is called an avalanche. Most frequently this terrible destruction is in the form of large masses of rock and earth, which in the spring, by the action of water and frost, split off from the face of the mountain, and descend with such power upon the plain, as to sweep away in their progress large forest trees, cutting a track of utter desolation through woods and vineyards, and over whole villages even, as it were in a single moment.

Soon, we were below the snow clouds which were still visible like a white mantle, on the mountain peaks, and quietly walking in a warm summer sun amid green fields in the valley. The whole passage from summer to midwinter and back again to midsummer, occupied but six hours, and although we saw nothing of the fine views that are usually had from the summit of the mountain, we felt satisfied with the strange, wild scenes through which we had passed, though not sorry that our passage was an experience rather than a present reality. And at the foot of the Gemmi Pass, we will for the present take a rest.

H. F. F.

For the New England Farmer.

DRAINING AND IRRIGATION.

A correspondent, over the signature of "S. F.," in the weekly *Farmer* of 6th inst., writes upon *thorough draining and irrigation*, recommending the latter as well suited to our climate and soil, and condemning the former as an English process imported with the "theoretical agriculture" that "comes directly from that country," and not required in New England. "S. F." seems to be aware that "thorough draining" has been successfully tried in England, but he cannot be well informed of the extent, methods, or results of this great modern improvement in agriculture, which has added 25 per cent. to the products of British soil in as many years, and which with its predecessors, *rotation of crops* and the *turnip culture*, now enables English farmers to compete successfully with the cheap prairie land of the West, and the cheap labor of the East, in growing wheat without the protection of the corn laws.

He says, "But must the English practice of thorough draining and hob-nail shoes be followed in the United States? Is draining with tiles 'the next great step to be taken in the march of improvement on all our old farms' in New England? Will any one who ever did so much at farming as to dig a hole in the ground in this country, adopt the language of Mr. Smith, which I have put in italic letters, when he draws up a description of the soil and the subsoil through which he penetrated? Or will he infer from the dry sand and the loose gravel which here generally lies from five to fifty feet over any thing 'saturated with water,' that the American farmer must expend twice the value of his farm to rid himself of the 'surplus fluid?'"

The theory of Mr. Smith, of Deanston, does not assert that draining is required for "dry sand and loose gravel overlying from five to fifty feet any thing saturated with water." It goes to the extent of laying dry, retentive soils, of lowering the "water table" to a proper depth beneath such soils, that they may become, in respect of the passage of water through them, like sand or loose gravel, and furnish its free descent by gravitation. Applied first to very wet or heavy soils, and found so beneficial, it was extended with success to others of a lighter character, clay loams, and even sandy loams, such as the light lands of Norfolk, now famous for its "rotation" as for sheep and other husbandry.

But admitting it to be useless for sand and

loose gravel, there are in New England many thousand acres of clays, clay loams, and generally loams very retentive of water. These are not insignificant in extent or in their productions, constituting the most fertile meadows and fields of many farms; and these require to be relieved of that surplus water which saturates and often submerges them in spring or fall, and which when evaporated in summer, leaves them compact, parched and *baked*.

Fully persuaded by the study of this theory, and the results obtained by others, and by my own practical experiments, that all the benefits attained in England, *and more*, are attainable here by thorough draining our most fertile soils, I am induced to correct some of the errors of fact and reasoning in the paper of "S. F.," as well also to provoke inquiry for the truth, and encourage the sure test of practical experiment upon the process.

The assumption that the humidity of England's climate creates a necessity for drying the land there, which does not exist here, is denied by the rain guage. That instrument shows a much larger fall of rain annually in New England than in old England. The apparent or sensible moisture in the air is less here in midsummer, because of our higher temperature at that season.

But so far as getting off the water is concerned, we must consider the seasons of its abundance—spring and autumn. At these seasons, no one will contend, we have any deficiency of moisture either in the soil or in the air. In the summer, our hot sun and drying winds cause a rapid evaporation from the earth's surface. Then, if not moistened by frequent showers, our lands suffer from *drought*, and then it is, according to "S. F.," that draining would aggravate that injury. Not so—the very reverse is the fact. Thorough draining is the best, almost the only protection to our clayey lands and their crops, against injury by drought. The fact has been well tested by repeated experiments, including in their range the dry season of 1853, and the reasons for it are found in the operation of familiar natural laws, and as negative as well as affirmative theories are liable to errors and fallacies, practical men will do well to give a fairly conducted experiment to a process which has proved of such immense benefit to another country, before denying it to ours.

To the affirmative part of "S. F.'s" proposition, the value of *irrigation*, I heartily assent. It has surprising effects as a fertilizer, and gives new effect to elements of fertility in the soil. The recorded results of experiments in England and Scotland almost surpass belief, in the increased production of grass; and its practice in Lombardy has long been commended as worthy of imitation. But unless there are peculiar local advantages, such as an elevated head of water in close vicinity, it requires a costly apparatus, which few can afford, and to be quite efficient, should be preceded by thorough draining and subsoiling. On the other hand, there are few farmers who can afford to let their thin arable lands retentive of surface waters remain undrained. *That* water wastes their labor, their manure, their solar heat —it tends to poverty. B. F. NOURSE.

THE BERKSHIRE CULTURIST.—This is the title of a new paper published at Pittsfield, Mass., by Messrs. *Reed, Hull & Pierson*, and edited by our old friend, Dr. REED. It purports to be devoted to the interests of the *farmer*, the *horticulturist* and *mechanic*;—the *school-room*, the *housewife* and *fireside*; and it has in this first number a dish of which each may partake and find wholesome nutriment. We wish it abundant success.

FIFTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE N. E. FARMER.]

The fifth meeting of the Legislative Agricultural Society took place at the State House, in the Representatives' Hall, on Tuesday evening.

Mr. ASA G. SHELDON, of Wilmington, presided, and on assuming the chair, offered a few remarks upon the subject for discussion, viz.: "*The preparation and application of manures.*" It had been said that a bank of manure was the richest bank a farmer could possess, and the speaker had never heard the assertion doubted. He believed it was an admitted fact that all manures should be composted before used. This being admitted, it was important to know the easiest, cheapest and best way in which it could be accomplished. The best way the speaker was acquainted with, was to team the manure upon the ground and backfurrow it in. If the cows lie in the yard, and there is plenty of earth lying around the yard, it has been found to be an excellent method to throw the manure into a pile in the morning and cover it up with earth. The speaker had never found any manures more valuable for various applications than that composted after the foregoing method. About three times as much earth was needed to be thrown on as there is manure. It had been said that guano was a humbug; but the speaker thought the guano itself was not so much of a humbug, as were the dealers in it. The first guano the speaker ever purchased, he found on application to be very good, but since then he had received but little benefit from it.

Mr. W. J. BUCKMINSTER wished to inquire how far it was best to compost manure for field use, and for those who do not raise produce for market. Certain manures were good for certain purposes, which may not be so well adapted for other uses. There was a difficulty in composting barn manures, among farmers, particularly at certain seasons of the year, when they were wanted for farm purposes, and it was important to know whether it would prove of more advantage to save the manure for composting purposes.

Mr. ALLEN, of Tisbury, was in favor of the preparation of fine manures, and thought the manure prepared in cow-yards, after the manner alluded to by the President, to be the most valuable.

Mr. D. W. LOTHROP, of West Medford, said if farmers would lay it down as a general rule to take care of the ammonia in manure, all the other ingredients would take care of themselves. The speaker considered it a good plan to use liquid manure, which enters immediately into use. He was something of a horticulturist, and he had been in the habit of sinking a barrel in his garden in order to collect all the water from the sink. Where he made an application of the same he found it very valuable for various purposes. The speaker alluded to the application of charcoal around trees, and said, so far as his experience went, it was excellent as an absorbent, when finely pulverized. The speaker believed that snow was more beneficial to the ground than rain. In regard to the liquid manure of cows, he said that he had recently looked into a work, by Mr. Johnston, which stated that the liquid manure of cows during a year, generally amounted to from 1200 to 1500 gallons. Now, if a cow voids 1200 gallons of liquid manure in a year, it would produce 250 pounds of ammonia, which would amount to $31.—The speaker was somewhat astonished at such a statement, and he was inclined to think it could hardly be worth so much. The ammonia of good, *rich* manure, however, flowing into the Thames from London (gross flowage daily 115,000 tons,) had been estimated at about 3800 tons daily, which was fully sufficient to manure over 50,000 acres of land. At this ratio, the flowage in the harbor of Boston would be sufficient to manure 5000 acres. The speaker observed that the clouds were the great public store-house of liquid manure; and in the annual fall brought down 20 lbs. of ammonia and 100 lbs. of nitric acid to the acre. The acid united with the soda, lime and potash in the soil, and formed their corresponding nitrates, which are known to be powerful fertilizers.

Mr. CHENEY, of Holden, thought all manures should be worked over and made fine. The speaker was not certain in his own mind, whether it would pay to take the spring manure which is in the barn cellar and go through the long process of composting it. His own method was to cart it on the land, and spread it and plow it in. He thought this was the best way. Farmers who depend upon corn and potatoes, can hardly afford time to compost all manure, and it requires so much work it seldom pays.

Mr. MERRIAM, of Tewksbury, had composted everything in the shape of manure for two years. He keeps his horses and cattle together in order to do so, and in the spring plowed the yard and mixed the whole together, and he found such manure valuable. In alluding to the application of manure to Indian corn, and its modes of application, the speaker said he had but little faith in deep plowing, as on certain soils it tends to bring up a cold soil which requires an immense amount of manure upon it. There was no reason for deep plowing, and the speaker recommended the application of manure near the surface. The cultivation of Indian corn the speaker regarded as the most profitable business the farmer could engage in, but it must be cultivated on certain principles. With the method of deep plowing, manuring in the hill, hoeing the corn three or four times with rather lazy men, &c., it could not be expected the cultivation of Indian corn would prove profitable. But by a systematic method, the cultivation could be made more profitable than any other crop. The application of manure on corn has not been profitable. We plant for corn and not for stalks, and the application of manure in the hill tends to the last result. Our cultivation of Indian corn had been absurd. The speaker believed the proper way was to spread the manure.

Mr. INGALLS believed great benefit was to be derived from the composting of manure. He had not much faith in the quality of manure made in the barn cellar, as the farmer would not get as much corn, load for load, of such manure as that of another kind. The great difficulty in regard to composting manure was on account of the soil to which it was to apply.

Mr. MERRIAM had no faith in the system of concentrated manures. He thought farmers should rely wholly upon the manures manufactured in the cow and hog-yard. He had found muck, saturated with the urine of neat cattle, worth all solid excrements.

Mr. PARKER, of Worcester, had had much experience in concentrating manures, and was of the opinion that no benefit was derived from guano or similar manures, with the exception of ashes. He had found dried charcoal to be of advantage by sprinkling it in horse stables.

Mr. RICHARDSON, of Winchester, thought too much stress was laid on the ammonia in manures.

Mr. BARBER, of Gloucester, offered a few remarks in regard to the best method of composting manure, after which the meeting adjourned.

The subject announced for discussion at the next meeting was the "*renovating of our pastures and other worn out lands.*"

CURE FOR WARTS.—If they give you no special inconvenience, let them alone. But if it is of essential importance to get rid of them, purchase half an ounce of muriatic acid, put it in a broad-bottomed vial, so that it will not easily turn over; take a stick as large as the end of a knitting-needle, dip it into the acid, and touch the top of the wart with whatever of the acid adheres to the stick; then, with the end of the stick rub the

acid into the top of the wart, without allowing the acid to touch the healthy skin. Do this night and morning; a safe, painless and effectual cure is the result.—*Hall's Journal of Health.*

For the New England Farmer.

THE HEIGHT OF MY AMBITION.

BY R. T. H.

A beautiful cottage embowered in vines—
Just large enough for two;
Where the tangled rays of the bright sun shine
The leafy curtain through;
Where the notes of warbling birds resound,
At the blush of young morn so still;
Where the little nest of eggs is found
In the branch by the window sill;
Where the squirrel frisks nimbly in joyful glee,
At earliest peep of dawn;
Where the sky is blue, where the air is free,
And green is the verdant lawn.
I ask for no mansion with arching dome,
Or the meed of high position;
For the quiet joy of the cottage home
Is the height of my ambition.

Yet I would not live in this home alone,
For 'twould far sweeter be
To sit with a wife on the low door stone,
And 'neath the spreading tree—
To read to her when the winter night
Falls dark o'er the cottage bower—
To wander with her when morn's red light
Opes the eyelids of the flower:
To meet her with smiles, morn, noon and even,
And part with a loving kiss—
To make our home an earthly heaven
Of purest human bliss.
'Neath the sunlight's glance and the blessed rain,
And from earth's own blest fruition,
To gather our fruit, and the golden grain,
Is the height of my ambition,

And a little room, in a quiet nook,
O'er looking the rosy flowers;
Where we both might sit, in a world of books,
In the heat of noon-tide hours;
And converse hold with the years that are gone,
And with regions far away;
With the author's mind, whose radiance shone
O'er the gloom of life's darkened way.
From this cottage home, with its vine-clad bower,
And the roses o'er the door,
We could view the works of a Master's power—
No king can e'er do more!
For the choicest gifts of a father's hand,
Have sped on their holy mission,
And to dwell 'neath their folds, in this flowery land,
Is the height of my ambition.

Where there hang, at even, the richest folds
When the lingering sunbeams rest;
Where heaven's rich painting the eye beholds
O'er clouds in the distant west;
Where, to greet the God of day above,
Each flower-face turns to heaven,
And chooses the rays which best they love
From among the glorious seven;
Where the warbler bathes in the rippling stream,
And rings his sweet notes of praise;
Where honors attend the daylight's gleam
In the swell of myriad lays;
There to live, and to work, for an heavenly life,
In the mem'ry of life's transition,
In this beautiful cot, with my own sweet wife,
Is the height of my ambition.

COUNTY SOCIETIES.

Through the attention of H. O. HILDRETH, Secretary, we have received the transactions of the Norfolk County Agricultural Society for 1857. It is beautifully printed, contains many valuable articles, and one by Mr. J. M. MERRICK, Chairman of the *Visiting Committee*, ought to be reprinted in all the agricultural papers. It is surprising to us that any county society fails to send out such a committee. The address was by Rev. ALVAN LAMSON, of Dedham, and is a credit to his head and heart. The Norfolk Society has many men of much ability and zeal in the noble work of agricultural improvement.

The WORCESTER WEST SOCIETY'S Transactions contain an Address by Prof. J. A. NASH, excellent, of course, as all his productions are, and the brief reports of committees, among which we find the following:

STATEMENT OF PETER B. DERRY.

My dairy consists of 13 cows. I commenced making cheese the 25th of March with the milk of one cow, and added that of the others from time to time as the calves were disposed of. I have sold from the 13 cows,

262 cheeses to market	5099 lbs.	$561,02
7 I have consumed and sold at home	127 "	13,97
56 I have on hand, estimated to weigh 22 pounds each	1232 lbs.	123,20
	6338 lbs.	
I have made butter	52 lbs.	$13,00
Sold and used milk	490 qts.	14,70
The 13 calves were sold		128,00
Total		$853,89

It being an average product of $65,68 to each cow.
Barre, Sept. 17, 1857. PETER B. DERRY.

PLYMOUTH COUNTY SOCIETY.—The report of the committee on "Produce and Improvements" is an interesting paper—all the rest is brief reports of committees, without any facts for consideration, and the statements of contributors.

MIDDLESEX SOCIETY.—This report is well printed, has a comprehensive account of its late exhibition by Dr. JOSEPH REYNOLDS, the Secretary, a short, practical, *living* and *breathing* Address, by Rev. CHARLES BABBIDGE, of Pepperell, the usual reports of committees, and a most admirable report upon the *Culture of the Grape*, by E. W. BULL, of Concord, the originator of the *Concord Grape*. This society is in a very prosperous condition, has many skilful and earnest farmers among its members, and has been highly influential in promoting the agriculture of the county.

WORCESTER NORTH SOCIETY.—The Exhibition was at Fitchburg. Address by JUSTUS TOWER, Esq., of Berkshire County; a plain, practical, common-sense, excellent production,—one of the most difficult addresses imaginable to write. We wish our limits would admit the whole, but we have room for a single paragraph only now,—but that ought to arouse every farmer of the State to renewed exertions in his calling. He said:—

"Although there have been added in this Commonwealth to the lands under improvement since 1840, 300,000 acres, and although the upland and other mowing lands have been increased more than 90,000 acres, or nearly 15 per cent., and the tillage lands increased more than 40,000 acres in the same period, yet there has been no increase in grain crops, but an absolute depreciation of 600,000 bushels. * * * This plainly shows the condition of agriculture in Massachusetts as a whole, and with an increasing population, with good markets, and every facility for improving and restoring our lands, it is truly an alarming state of things."

Can this be so? We wish Mr. TOWER would show us how the fact is obtained.

The reports by CHARLES H. MERRIAM, on Steers, by SOLON CARTER, on Oxen, by JOHN M. HARRIS, on Sheep, by J. S. BROWN, on Vegetables, by EZRA KENDALL, on Farms, by JONAS A. MARSHALL, on Gardens, by E. F. BAILEY, on Orchards, and by W. G. WYMAN, on Grain, are all valuable papers, each containing either statements or suggestions that must be valuable to their brother farmers. The statement of JABEZ FISHER, upon the Culture of Pears is an elaborate and well-drawn paper, containing much information of value to those who wish to engage in the cultivation of that delicious fruit.

We shall be glad to receive a copy of the transactions of each county society in this or any other State.

STRYCHNINE.

This poison which has of late become so notorious in its abuse, (we cannot say use,) is the most uncertain in its action on the human frame; in some producing instant death; the same dose in others only bringing on tetanic convulsions, and in a lucky few no effect at all; and this does not appear to have any relation to the physical strength of the patient. It is a whitish, crystalline substance, and is extracted from the nut of a tree called strychnos *nux vomica*. This tree grows in Ceylon, is of moderate size, and has thick, shining leaves, with a short, crooked stem. In the fruit season, it is readily recognized by its rich, orange-colored berries, about as large as golden pippins. The rind is smooth and hard, and contains a white pulp, of which many varieties of birds are very fond; within this are flat, round seeds, not an inch in diameter, covered with very beautiful silky hairs, and of an ash grey color. The nut is the deadly poison which was well known, and its medicinal properties well understood by Oriental doctors, long before Europe or America had heard its name. "Dog-killer" and "fish-scale" are translations of two of its Arabic names. The natives of Hindostan often eat it for months, and it becomes a habit, like opium-eating, with the same disastrous results. They commence with taking the eighth of a nut a day, and gradually increase their allowance to an entire nut, which would be about twenty grains. If they eat directly before or after food, no unpleasant effects are produced, but if they neglect this precaution, spasms result. The chemical tests for it are numerous, but only one or two can be relied upon as thoroughly accurate.—*Scientific American.*

For the New England Farmer.

CROPS ON PEAT MEADOWS.

MR. EDITOR:—I have a peat meadow, three acres of which I broke up in the fall of 1855; the following spring I planted the same with potatoes; they grew finely, but were all destroyed by the great rains in that year; in the fall I levelled the ridges and forked over the whole, and planted potatoes again in the spring of 1857, which produced a little over 200 bushels. I have now drained it more thoroughly, so that the surface, to the depth of six or eight inches, is well pulverized; below this the peat is from two to twenty feet deep; have sounded sixteen feet without finding bottom.

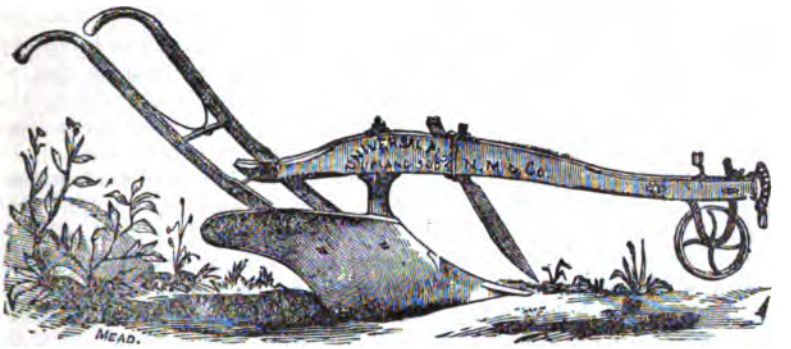
Now what I would like to know is, what crops will it grow beside potatoes and grass, and must it be gravelled to produce the latter? If you, or some of your correspondents, will give me your experience or advice you will confer a favor on

Jan. 26, 1858. ESSEX COUNTY.

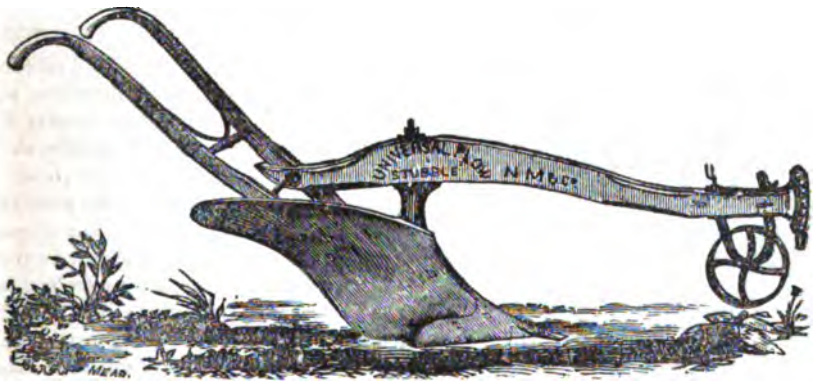
REMARKS.—We have seen corn, oats, cabbages, beets, carrots, onions, &c. &c., growing on such land as you describe, without its being gravelled,—but that operation would undoubtedly secure better grass. With six or eight inches of the surface well pulverized, and *with sufficient drainage*, such land will produce most crops common to our farms, with the exception of barley. Buckwheat we have seen growing on them with great luxuriance. Many of our readers have had much experience with such lands, and perhaps, may give some detailed account of the operations on them.

THE LATEST INVENTION.—A mill has been started in Haverhill for the preparation of "granular fuel." The "masheen" will cut into four inch length all sorts of brush, such as huckleberry bushes and similar shrubs up to large alder branches. The fuel will light without shavings, and will burn longer than charcoal, and answer the same purpose, and it is considerably cheaper The *Banner* thinks it a good thing, and says it will give the farmers in that vicinity a chance to rid themselves of huckleberry pastures, which are to many a constant source of complaint and annoyance.

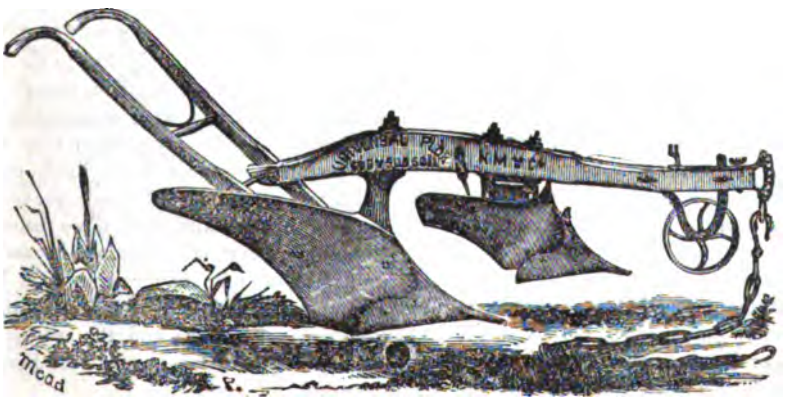
PRESERVE THE PAPERS.—Forney's *Press* has a very readable article on English and American newspapers, from which we learn that "three copies of each newspaper," signed by the publisher, must be regularly transmitted to the Stamp Office, which pays full price for them. After the expiration of a year, one complete file of each journal is transferred to the British Museum, where they are bound in volumes, and preserved for reference. A most excellent plan it is, and Macaulay has repeatedly acknowledged his indebtedness, as a historian, to these valuable sources of contemporary information.



No. 1 is a side view of the Plow rigged with one of the Upland mould-boards, for plowing flat furrows in stony or rough grass land.



No. 2 is a side view of the Plow rigged with one of the Stubble mould-boards, for plowing stubble or old ground.



No. 3 is a side view of the Plow rigged with one of the Stubble mould-boards and the Skim Plow forward, for Double, or Sod and Subsoil plowing.

PLOWS AND PLOWING.

In the weekly *Farmer* of February 20, and in the monthly for March, page 28, we briefly spoke of the operation of plowing, of the efforts that have been made to devise new forms of the plow, and introduced two or three illustrations of the new UNIVERSAL PLOW, recently invented by Mr. FREDERICK HOLBROOK, of Brattleboro', Vt.

As the proof of the pudding is in the eating, so the test of the plow is in the using; for, to the eye, it may possess all the graceful curves and nice lines imaginable, in beam, mould-board, share and cutter, yet upon applying it to the work about to be done, it will sometimes fail to accomplish it. In the construction of plows, whatever be the sort used, there are a few general principles that ought invariably to be attended to, and Mr. HOLBROOK has given these the nicest care. It will be seen that he has given that part which "enters, perforates, and breaks up the ground, that sort of long, narrow, clean, tapering, sharpened form, that affords the least resistance in passing through the land; and to the mould-board, that kind of hollowed-out and twisted form, which not only tends to lessen friction, but also to contribute greatly to the perfect turning over of the furrow-slice." The beam is also so contrived that the team may be attached in the most advantageous line of draught.

Some of the advantages of the UNIVERSAL PLOW are these: It is sold with one mould-board only, or with any number, as the purchaser may select. It is a desirable implement if but one mould-board is wanted, because that one will do thorough and finished work, and when worn away considerably or broken by accident, its place can be cheaply supplied with a new one. Again, the purchaser, after obtaining one mould-board, and the standard, share and frame-work to go with it can at any time procure such other mould-boards, of the series as he would like, at slight expense, as compared with buying new plows entire; and thus he may be induced to employ a larger and better assortment of plows, suited to his various fields and modes of culture, than he would otherwise use.

The opinion which we offer of these Plows was not made up in the parlor, by reading descriptions and an examination of figures of them, but by actual trial in the field, and in the presence of many spectators.

It was on one of those calm and sunny days of middle November last, that some dozen persons—most of them as good at the handle of the plow as any son of Neptune ever was at the helm of a ship—assembled upon our farm to test the *Universal Plow*. Mr. HOLBROOK, the inventor, was present, and assisted throughout the day. His associates were all practical farmers, men who not only plan but work out results by their patient, daily labor, and who quickly discover and appreciate whatever will be likely to facilitate their plans and increase their profits. The teams for the occasion were a pair of horses, a yoke of oxen and a four horse team, so that whatever change was made in the plow for working deep or shallow, narrow or wide furrow-slices, there was a team present ready for it.

The ground to be plowed was free from stones, a portion of it covered with a thick sward, and the remainder stubble ground. It is scarcely necessary to occupy space with a detail of the *precise* operations of the several mould-boards, as to inches in depth and width, as there was no difficulty whatever in doing as much *good work* within a limited time as would satisfy the most exacting. At high noon the teams went to their provender, and the plow people from labor to refreshment. The ample dinner provided by the mistress of the mansion was pretty much a *home-made* affair; roasted turkey and cranberry sauce, delicious ham and cup potatoes, bread from wheat that grew in the young orchard, and pies from the apple-trees that stood among the wheat, with various incidentals, made up the country dinner; but all this was seasoned with an earnest, intelligent and instructive conversation upon *Plows* and *Plowing*, in character with the work that had been done. It was in reality a *feast of reason*, as well as of the good things which the farm affords.

Thus physically and mentally refreshed, as soon as the sun leaned from the zenith to the west, men and teams were moving again, and continued the trial throughout the afternoon. Mr. HOLBROOK invited any objection that presented itself, and gave such pertinent illustrations both by hand and word, as to satisfy all that he had achieved a signal success with the plow. The day was not long enough to permit a trial of all the mould-boards; but two or three of the *intervale*, as many of the *upland*, the *prairie* and the *double mould-board* or *skim-plow* were tested.

Something was certainly due to the skill with which the plows were handled, though these experienced workmen were unanimous in their commendation of every pattern that was tried. The double plow drew forth lively enconiums; and it was often said—"I have never seen so good work with the skim-plow done before." The stubble-plow certainly surpassed in execution any we had before seen, in throwing up a large column of earth, and leaving it in a loose and well pulverized condition; and this without an unusual strength of team, a pair of horses doing the work.

We feel free to advise our friends to make a careful examination of the *Universal Plow* before purchasing.

For the New England Farmer.

THE TREADWELL FARM IN ESSEX.

By the generosity of an eminent physician of Salem, lately deceased, the Essex Agricultural Society have recently come into the possession of the Treadwell farm of one hundred and fifty acres, centrally situated, in the town of Topsfield. What to do with it is now the question?

We perceive that the Trustees have advertised for some one to take charge of it; but whether *with* or *without* the means of support is not stated in their notice. If they can find any smart man, with a wife, who will take charge of it, for ten years, and improve its condition, under their supervision, taking the produce for his services, this will relieve them of much anxiety, and possibly show that a *worn-out farm* can be redeemed. Here is one of the best enterprises for farmers, within our knowledge. Smart young men, with healthy wives, now is your chance. Better labor here than on the prairies of the West.

February 24, 1858. ESSEX.

REMARKS.—Few, if any, doubt that the operations of the county agricultural societies of Massachusetts have been productive of much good; that they will continue to do as much good in the future, as in the past, admits of a doubt. The keen edge of their novelty is worn off, and the people are inquiring whether some new field of enterprise may not be entered, promising better results? In the acquisition of the "*Treadwell Farm in Topsfield*," by the Essex county society, there is the initiatory movement precisely in the right direction, which we have often suggested, but which has not yet met with public favor. We therefore respectfully beg leave to suggest to the Trustees of the Essex society that the *Treadwell Farm* shall in future become the scene and centre of all their operations,—and that it shall bear testimony upon its face of the acknowledged skill of these Trustees to make it blossom as a rose, *at a living profit*. And,

1. We suggest that an accurate survey of the farm be made, and the actual value be ascertained of what it may be sold for, for *farming purposes*.

2. That photographic views of the buildings and their surroundings be taken, and an accurate description be made of them, both inside and out. To which add a faithful account of all the fields, pastures, forests and roads of the farm, showing how much wood or timber there is standing upon it, how much hay is cut per acre, and where, how much stock it was capable of pasturing last summer, how much corn, grain, fruit and vegetables were raised, and in every way the precise condition and increase of the farm. Let these descriptions be criticised by a visiting committee, corrected if necessary, and then filed in the archives of the society for future comparison.

3. The farm is now ready to receive an impress from the genius and skill of the Board of Trustees—how and what they shall direct, it is not pertinent for us to suggest.

4. As it would become necessary that the Trustees should occasionally see the farm, it is suggested that all their meetings for the transaction of Society business should take place there, in addition to the visits of any supervising committee.

5. Prepare the farm for and *hold all the annual Exhibitions upon it*, where all, having a common interest, can meet upon common ground. If necessary to erect new buildings for farm purposes, erect them as far as possible with movable partitions, so as to accommodate the wants of the exhibition,—and convert the barn floor into a grand fruit room for the fruit show, if you cannot do any better. Here let every thing centre, and here, at home, on your own soil, under your own roofs, will soon congregate such crowds of the substantial and intelligent people of your county as will make your exhibitions more popular than your itinerary plan can ever do.

6. Here, directed by the wisdom of your Board, will grow up examples of great practical utility to the farmers of the county in many things: In the buildings you construct, in the fields you lay out, in the stock you rear, the crops you harvest, the implements you use, the manner in which you plow, make your hay, drain, subsoil, or irrigate, and in the modes of feeding stock, in the raising of fruit, roots, and many minor matters, but still matters of importance.

In witnessing the productions of other parts of the county, concentrated upon the farm, the visitor may also behold the farm itself, learn what it has yielded, and by the Trustees' records, how the crops were produced, and at what profit.

We had hoped Middlesex would take the lead in this movement—but it is the good fortune of Essex to possess the means of starting first. We hope she will give her sister counties a noble example.

For the New England Farmer.

THE THINGS I RAISE—NO. 8.

JENNY LIND POTATO.

This is a very productive sort, the potatoes growing very large, shaped somewhat like the Rohan, except longer; the eyes are deep sunk, color light red, almost pink. This variety sports so that sometimes an entirely white potato will be found among them. It is a profitable sort for cattle and pigs; not very good for table use, as it is yellow meat and a little strong. This is identical with the Rhode Island Seedling.

POGIES.

This is the same potato that was cultivated some years ago under the name of Cow Horn. It is long, flat and smooth, the eyes are scarcely perceptible, color dark purple, almost black; meat purple next the skin, inside nearly white; mod-

erately productive, fine for baking and good for boiling; rots badly in some localities. This variety does well in Nova Scotia, from whence Boston market is supplied. I think it equal, if not superior, to all other potatoes for baking.

The Bullard's Seedling, Cristy, Fluke Kidney, Lapstone Kidney, Old Kidney, Irish Cups, White Cups, Bowen's Seedling, Lady Finger, Vermont Whites, Calico, Pink Eyes, Black Chenango, Mexican, Prescott, Crackers, and many others that I could name that I have tried for years, are not worthy of general or extensive cultivation.

It was my intention when I begun these articles to continue them through the winter and spring, having made notes on all the matters of which I intend to speak, but having in some way lost or mislaid the memoranda, I may not trouble you and your readers with my loose remarks. I shall give more attention another season to the various vegetables, new and old, and shall perhaps give you some of the results of my labors. I shall give you one or two articles on the Chinese Sugar Cane, giving the results of my experiments, &c. JAMES F. C. HYDE.

Newton Centre, Feb. 15, 1858.

For the New England Farmer.

SAWED SHINGLES.

The time has past when the farmers of New England raised the raw material for their own clothes, and when our grandmothers could rival Manchester or Lowell in the manufacture of substantial fabrics. We sometimes sigh for those good old times; especially when the slight intrusion of a knot or nail against our new and ready-made pants show marked symptoms of premature exposure and early decay. There are many of the customs, habits and materials of by-gone days that I wish were with us still; not the least among which are old-fashioned *rift shingles;* and while my hand is in wishing, I would have them at the old-fashioned price, which was about two dollars per thousand. But alas! I have failed of many a pleasant ride, because wishing didn't bring the horses. I might just as well look for the return of the hand spinning-wheel and loom, at the present prices of labor and manufactured goods, or the method of transportation and communication of fifty years ago, as to advocate the use of such *shingles* as were made then, when the lumber in its native forests was as abundant as the rocks of the granite hills where it grew. Then, when the farmer had a leisure day, he could go into the woods, and rive a thousand shingles, which he could afford to sell for a less price than the cheapest sawed shingles are now sold for.

I saw an article in the *Farmer* of Jan. 9th, in which the writer strongly condemns the use of sawed shingles. He thinks "the community have paid about enough for experiment, and it is about time to have it awakened to its true interest." So do I. An experiment of forty years with an increasing demand, is pretty conclusive that it is awakened, and finds its true interest in using sawed shingles.

Sap shingles, so called, are a cheap kind of sawed shingles that are used extensively in Rockingham and other counties in N. H., with good satisfaction; costing about two dollars and twenty-five cents per thousand. It is thought that common roofs can be kept covered with this quality of shingles at a less expense than with the best sawed or rift shingles. Since the edict has gone forth that "man shall eat bread in the sweat of his brow," it matters but little whether a man expends fifty dollars in covering his house once with good shingles, or the same amount in covering it twice with a cheaper article, if he can make it pay.

In the article above referred to, it is said, "there are very few sawed shingles that are not sawed cross-grained, as it is called. This comes of necessity in the use of the saw, and it is unavoidable that the rain will at once penetrate the entire shingle."

I am aware that moisture penetrates soft wood very rapidly, and more so in the direction of the grain than across it, and perhaps there are some kinds of wood so porous that water will filter through it; but such timber is not usually sawed into shingles; most of the sawed shingles are made from pine, spruce and cedar, which will not leak water until they become rotten or worn out, however cross-grained they may have been sawed.

The writer also attributes the rusting of the nails to sawed shingles; but by a little investigation he will, without doubt, find it attributable to their contact with salt water. It is believed that the complaints of shingles rusting the nails is mostly confined to sea-board towns and eastern shingles. Sap shingle, eighteen inches long, costing $2,25 per thousand, will last without leaking from twelve to fifteen years. Admitting that they will remain sound only twelve years, also admitting that the best rift shingle, the same length, i. e. 18 inches, to cost $5,25 per thousand, and last any length of time, however long; the sawed shingles are the cheapest. For it will be observed that allowing seventy-five cents per thousand for laying the shingles, which is a fair price, it costs three dollars per thousand less, to shingle a roof with sawed sap shingles than it does with the best rift shingles; which, with the interest, would amount to six dollars in twelve years, the time which the shingles are presumed to last. Thus it will be readily seen that the sum which it would cost to cover a roof with the best rift shingles, would keep it shingled forever with sawed shingles, allowing them to rot every twelve years. JONATHAN A. ROBINSON.

Fremont, N. H., 1858.

TREMENDOUS HOGS!!—Mr. J. W. BLACK, of Jobstown, N. J., sends us an account of some hogs which "beat all nater." He says *Isaac Harrison*, of New Hanover, slaughtered 35 recently, whose total weight was 19,415 pounds, and their average weight 554 lbs.

Joseph K. Hulme, of Fountain Green, 21 hogs, averaging 455¼ lbs.! *Joseph Newbold*, of Wrightstown, 26, averaging 461 lbs. per hog! Same town, *Alex. Shrove*, 21, averaging 532¼ lbs.! And *Thomas Hood*, of Shelltown, 44 hogs, averaging 533¼ lbs. per hog. The average *age* of the hogs was 20 months, and they had *no feed but grass* between May and September last.

For the New England Farmer.

MOWING LANDS.

MR. BROWN:—Since it is a cherished principle with most farmers, that short articles upon practical agriculture are of the most general interest, I am induced to give a few thoughts upon mowing lands, and perhaps add some upon kindred subjects. On most farms in New England, there is a proportion of moist and dry soils. The usual method of applying manures to dry soils by plowing and thorough incorporation is, I think, approvable. In the treatment of moist or wet soils, quite a different practice should be pursued. Since the hay crop is of more general value than any other in New England, it is of the utmost importance that we husband well our resources, for its greater production. Dry soils I would recommend for pasturage, and wet or moist for mowing, reserving, however, so much of the dry as is needed for cultivation. Wet soils, to be prepared for manureal treatment and a high productive condition, should first be drained either by open ditches, or by that better way, underdraining with tile, or stone. The latter method has been fully treated by HENRY F. FRENCH, who, by theory and practice, has beautified and vivified many cold and desolate places in our own land; and who, by the way, as a traveller, has found in Switzerland, *Deity*, where Bayard Taylor only found *Humanity*.

When the soil has been rid of its surplus water, then level and smooth the surface by such means as are most available. Now it is in a condition for *top dressing*. My practice has been for several past years to throw up swamp muck in the early fall, in a sort of wind row, letting it remain until another fall, when it can be handled most rapidly with a six tined manure-fork. I cart this into my hog and barn-yard, and also barn-cellar; this is to remain still another year, when the most of it becomes a highly concentrated manure, putting to shame, in its results, the specific and patent manures, which are crowded upon the public by false pretences. A portion of this manure I put into a heap near my corn field, and cover with soil or sand, and the remainder is applied to my moist mowing fields as soon as may be after the second cutting of grass has been completed. I wish usually to apply from twenty to twenty-five loads of twenty bushels each to the acre. This course, if systematically and persistingly adhered to, will produce two crops of grass every year of the finest quality, containing *most*, if not *all*, the elements of health and nutrition needed by cattle, especially milch cows.

I wish to add in this connexion, in view of the vast resources which may be found in our moist soils, that I regard the root culture of doubtful expediency as *extra* food for stock. It is well known that the main ingredient of all roots is water, and it would seem cheaper and far more sensible to furnish drink to cattle by the common methods of hydrostatics than by lacerated hands, aching heads and broken backs.

I wish to enter my protest against the ruinous practice, of fall or spring feeding of our mowing lands. When once made smooth, elastic, and porous, no man can receive any adequate advantage, by turning on to such a field a drove of cattle or horses to race over and change this beautiful field into a broken and jagged bed.

All damp soils should be kept as light and porous as possible, so that the rain may discharge its ammonia into every fibre and tissue of it.

Let our pastures be enlarged, and so supersede the necessity of feeding our mowing lands, and let the limits of our mowing fields be diminished, so that labor and capital may be better expended, and my word for it, two blades of grass *will* grow where but one grew before in our mowing lands, and our pastures, not over stocked, will become rich and highly productive by the free working of vegetable laws. S. G.

East Hardwick, Vt., Feb. 15, 1858.

For the New England Farmer.

REAL ESTATE IN RUTLAND CO., VT.

THE EFFECT OF THE MONEY PRESSURE ON IT.

I know not how it may be in other sections of Vermont, but in Rutland county farms have come into market within the last three months, and have been sold almost daily at prices varying from twenty-five to forty per cent. less than at any other period within the past ten years. The question is often asked, why is it that so many of our farmers are selling their farms at such reduced prices?

In no part of Vermont has land been valued as high as in Rutland county, during the past twenty years. Farmers have ascertained that not one farm in fifty *has* or *can* be made to pay four per cent. upon the assessed value thereof. Many of us find ourselves much in the predicament of a foot ir a small boot, and we are pretty well convinced that he who is in debt, and paying six per cent. interest, must remain in debt for a series of years to come. In other words, we fully believe that farming cannot be as good business for ten years to come, as it has been for the last ten years. What then ought those farmers to do who are largely in debt? What is a safe course to pursue? I say, sell out and pay up; and if we have anything left buy smaller farms, or go West where land is cheaper than in Rutland county. So say a large portion of the farmers of this vicinity.

I see that not only the country papers, but the city papers also, are crowded with advertisments of "*Farms for Sale.*" There are twenty such notices now, where there was one a year ago. Am I wrong in believing that all kinds of property are destined to be cheap for many years? Am I wrong in my conclusion that real estate here in the East, as well as the West, has materially depreciated, and that it will have to remain so?

Castleton, January 12, 1858. L. S.

REMARKS.—This is the first complaint of the kind that has come to our knowledge. The general effect is, when commercial business is embarrassed, and men recently engaged in it are thrown out of employment, they yield to the common desire of man, and seek the farm. Such has been the case in this region since the late revulsion; farms are in quick demand, and at fair prices. It is difficult for us to perceive how the good people of Rutland county have sustained themselves on farms where not one in fifty pays four per cent. on their assessed valuation. A

farm worth $3,000 would only give $120 at four per cent. Now does L. S. believe that such a farm would not yield more than that sum, even if it was turned to pasture, or left for a growth of wood alone! The difficulty of the matter lies in another direction, we think; in the want of proper cultivation. But *more or less capital is indispensable.* A farm is much like a mine. There must be capital with which to work it and bring to light the precious metals which lie hidden far below, or they never will appear. It is unreasonable to expect a farm worth only $1000 to produce an annual income equal to that sum: But upon tolerably good land, whatever capital is judiciously expended will usually give an annual interest of fifteen per cent.

For the New England Farmer.

FIELD ROLLER—FOUL IN THE FOOT—TO PREVENT PUMPS FREEZING.

FRIEND BROWN:—I subscribed for the *New England Farmer* last October, but, through the negligence of either the post master or myself, I did not receive any of the numbers until this month, then I received them all. In looking them over some ideas were suggested to me which I thought might benefit some of your readers.

In reply to Mr. Dimon, I agree with Mr. Holbrook as to the value of the roller. My father and myself have used one a number of years, and consider it one of the farming tools which ought not to be dispensed with. Although within a few years it seems to be more highly appreciated than formerly, it is not in that general use, which its merits demand. The roller can be used to great advantage on the mowing land in the spring; it rolls in all bunches and small stones; the larger stones and all other substance which will interfere with the scythe may be laid on the roller and carried to the end of the field. *It should never be used on wet land;* it is worse than useless—is injurious; instead of leaving the soil light, as on dry land, it renders it hard and clammy, and the heat of the sun will bake it so that it will crack like clay. Mr. Holbrook omitted to mention this fact, which I consider very important, as it probably explains the objection many persons have to the roller.

CURE FOR FOUL IN THE FOOT.

A simple cure for the *Foul in the Foot.* After cleaning the foot, pour in a few drops of spirits of turpentine, and unless in very aggravated cases, two or three applications will be sufficient. I have always used it, and when applied in season have never known its failing.

HOW TO PREVENT FREEZING OF PUMPS.

In winter, I often hear complaints of freezing of pumps; to prevent this; cover your well with a high platform; then prepare a box fifteen or eighteen inches square; according to the size of your pump, and sufficiently high to cover the nose; cut a hole around the pump as large as the box will admit. The steam arising from the water in the well into the box will keep the pump warm and prevent its freezing. Care should be taken to have everything made tight to prevent the steam from escaping. My pump has been thus covered for many years, and although it stands in a very exposed place, yet, during the extreme cold of the past winter, it has only slightly frozen over a few times. This remedy is very simple, and if done thoroughly, very effective, and saves the trouble of letting off the water or covering the pump with straw or bundles of stalks, which is useless. A.

East Lexington, 1858.

For the New England Farmer.

CULTIVATION OF THE PEAR ON QUINCE STOCKS.

MR. EDITOR:—Can any dependence be placed upon this stock, for the pear, as far north as this place, lat. 43°, where the mercury frequently falls from 20 to 30° below zero, and where the quince itself is not hardy, but is almost surely killed to the surface of the ground, although the roots usually escape injury?

Is the Angers quince more hardy than the other varieties?

I have for several years annually set a few trees on quince, but they have not succeeded well, but have mostly been killed the first winter from cold or some other cause.

Would the trees prove more hardy to procure stocks and buds here, thus raising trees in the vicinity where they are to grow than those raised in the vicinity of Boston? If so, how can the trees be protected so the stock will not winter-kill until the trees are set where they are to remain permanently? AGRICOLA.

Rutland, Feb. 10, 1858.

REMARKS.—We sent the above queries to one of the most successful pear growers in this country, Col. WILDER, who, with his accustomed kindness and promptitude, at once sent us the subjoined remarks:—

I reply, to the *first* question, yes, if any variety of the pear is hardy in Rutland—if the selection of varieties is judicious, and the junction where the stock is grafted be covered, *at the time of planting,* with three or four inches of soil.

To the *second,* I answer, that I have never discovered any difference as to the hardiness of the Angers or Fontenay quince, nor do I believe that one is preferable to the other as a stock for the pear.

To the *third,* I reply, experience must be the guide. Quince stocks two or three years old, with well ripened wood, whether grown here, or at Rutland, will withstand the severe alternations of weather better than those of younger grafting, but to either, it would be a great safeguard if they could be covered a few inches high with old compost, or decayed manure.

Pears on the quince should be planted in a luxuriant deep soil and be abundantly supplied with nutriment and good cultivation. If planted so deep that the point of junction may be three or four inches below the surface of the soil, the pear will frequently form roots independent of the quince, and thus combine early fruiting from

the quince and the strength and longevity of the pear stock. For instance, of trees of the same variety standing side by side in my own grounds for twelve years, and enjoying the same treatment, those on the quince stock have attained a larger size, and have borne for nine years abundant crops, while those upon the pear stock have yielded but very little fruit.

In a word, so far as my experience extends, I can see no difference in the hardiness of the same variety of pear, whether on the quince or on its own roots. Some varieties are not suited to the quince stock, others grow vigorously and bear abundantly. Some are as hardy in Vermont, New Hampshire and Maine as in Massachusetts. These remarks are made without reference to extraordinary climactic influences such as distinguished the winter of 1857.

MARSHALL P. WILDER.

REMARKS.—We hope you will; this is a subject of importance to a large number of our readers.

EXTRACTS AND REPLIES.

MEASUREMENT OF CORN.

MR. EDITOR:—I am most happy to greet our venerable friend, M. *A.*, of P., again in the field. What he says of his own knowledge, I should as soon credit, as the sayings of any other man. I believe him, also, truly worthy of the appellation model farmer, given him by Daniel Webster. But when he tells the public that a crop of corn measured *one hundred and forty-five bushels to the acre*, (this was the quantity, I think,) by a certain measurement of so many pounds for a bushel, weighed green in the ear, as it first comes from the field, I think the statement was not generally understood. A bushel is a bushel—neither more nor less—and is determined by the number of *cubic inches*. Corn is corn, when clear from the cob, fairly seasoned, fit to be ground. Any other mode of measurement does not accord with my notions of propriety. This must be my apology for strictures upon the mode of measuring heretofore used in the county of Plymouth.

February 6, 1858. P.

CELERY.

MR. EDITOR:—I at last appeal to you and your intelligent readers to inform me of a proper way to cultivate celery for market purposes. I have inquired in other directions, but thus far have failed.

1. Which is the best way to make a bed to prevent the ravages of the gnat, fly or worm, so very destructive to the young plant while in the bed?

2. What soil is best for rapid and tall growth?

3. How should the plants be set, what distance apart the rows, how deep the trenches, and what distance the plants?

4. How much manure should be covered or mixed with the earth before the plants are set?

5. How often, and how many times should it be hilled?

6. Are there any of the noted fertilizers of the day which will answer the place of manure for celery? Will not some combination of guano, bone dust, or other patent enricher, answer for manure?

7. Is there anything which will prevent rust or blast? This is one of the worst evils the farmer has to contend with in raising this plant.

8. Which is the best time to hill up, in damp or dry weather?

9. How can it be preserved through the winter, in an acre or two, so as to be handy to get at during the winter?

I will pay $25 to any one who will answer fully and give such directions as will enable me successfully to obviate the difficulties of the 1st, 7th and 9th questions; they shall have their money as soon as I prove their directions. CELERY.

Johnson's Creek, N. Y.

REMARKS.—We usually raise celery for family use only, and have no particular difficulty in getting good plants. There are persons among our correspondents who cultivate it largely, and who may throw much light upon the subject if they will. Please send it along—we will scatter it to the million.

WHITEWASH FOR SHINGLES.

I wish to make the inquiry whether whitewash is an actual preservative? I have read somewhere of dipping shingles in whitewash and salt.

Burlington, Jan., 1858.

REMARKS.—We have had no personal experience in this matter, but have been told that shingles dipt into boiling whitewash containing a little salt, will last indefinitely. If there were much salt it might corrode the nails and cause them to break off. Perhaps the safest way would be to use the lime alone.

ABOUT BUCKWHEAT.

Please to inform me how, and at what time, to sow and harvest buckwheat to advantage.

How shall I prepare and use lime for manure?

Jaffrey, N. H., 1858. D. S.

REMARKS.—When buckwheat is intended for seed, it should be sown about the middle of June, and then the crop will be in early enough to allow the grain to be perfectly matured before the usual frosts. Harvest when the grain is fairly glazed, to prevent its shedding.

There is no better way to prepare lime for agricultural purposes, to our knowledge, than by mixing it with muck. But if the land is a moist, granitic soil, containing an abundance of vegetable matter, then scatter the lime broadcast over it, at the rate of five bushels per acre.

WINTER BUTTER-MAKING IN VERMONT.

Last winter I had two farrow cows, consequently our dairy came in winter; but cows should be made profitable, whether they are summer or winter cows. I gave them one quart of meal each per day, and good care; so they gave a tolerable mess of milk through the winter. Pains were

taken to have milking done in such a manner that the butter tasted perfectly well. The milk was set on shelves made for the purpose in the room where we lived, which proved sufficiently warm for the cream to rise in thirty-six hours. The cream was then taken off and set in a cold back buttery every day through the week, which, of course, was frozen as hard as a stone.

The day previous to the churning evening, the cream was set in a warm place about the stove, and stirred as it thawed, until it was about the temperature of 45°. Care was taken not to have it melt. Under this treatment I never churned over thirty-one minutes, and often the butter came in fifteen minutes.

The butter came hard, and it cut as hard as that made in June. Carrot juice is an advantage to the taste as well as to the looks of winter-made butter. A SUBSCRIBER.

Reading, Vt., Feb., 1858.

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BOARD OF AGRICULTURE.

MR. EDITOR:—I have recently read in the *Maine Farmer*, published at Augusta, the doings of the Board of Agriculture, in Maine, at their annual meeting in January. A prominent object of this Board seems to be to give information to the people of what is done, and to advise them what is best to be done. I like this plan of action much. It is of no use to have such a Board, if they meet only occasionally to compare notes with each other, without putting forward their wisdom in a form to be understood and enjoyed by the people. Why not give a detailed account of what they do in your paper? How can you find anything more instructive to the farmers of the State, than the concentrated wisdom of their best farmers, as developed in their Board of Agriculture? If it is not so—then it has failed to fulfil the object for which it was organized.

Feb. 20, 1858. INQUIRER.

REMARKS.—Our columns are always open to spread before the people in them the doings of our State Board of Agriculture—but we cannot publish unless such doings are furnished us.

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VEGETABLES AND FROST.

Will you, or some of your correspondents familiar with agricultural chemistry, inform me why certain vegetables, as the different species of turnip, cabbage, &c., are able to resist the action of frost so much more than the different species of the vine, pumpkin, squash, &c., as also the potato and tomato? Is it owing to a different chemical composition? If so, what is the particular element, or what the combination of elements that produces the result? J.

Wendell, Jan. 23, 1858.

REMARKS.—We sent the above queries to Dr. C. T. JACKSON, an eminent chemist of this city, who kindly replied as follows:—

Boston, Feb., 1858.

DEAR SIR:—On my return home I found your note of 28th ult., and in reply would state that the different powers of resistance to frost, characteristic of certain vegetables, cannot depend on their chemical constitution, but must be owing to *their organic structure and vitality.*

The Chinese yam, for instance, and the parsnip, bear a frost below zero without injury, yet they contain a large proportion of water, which must freeze, expand, and rupture the cellular structure of the plant, but still the plants grow as well as ever. So with the vines and other plants you name, the water congeals but the effects are quite different. C. T. JACKSON.

—

PEACH TREES.

I learn from the most extensive grower of the peach in Essex county, (he having over 3000 trees in his orchard in bearing condition,) that he lost about 1500 new budded stocks the last winter, by reason of the snow and ice gathering around them so closely that when a thaw came, it slipped down and rubbed off the buds. This was a serious loss, as there is an anxious solicitude to obtain promising trees. This obstacle to their culture was new to me, though I think it might be prevented by proper care. I am quite sure the trees will not be thus incumbered the present winter, unless the snows are much more abundant than they have yet been. P.

Jan. 29, 1858.

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HOW IS SUMAC USED?

I wish to inquire what part of the sumac tree is used, how cured, &c.? There are two kinds here, the ball and the blossom, or poison sumac, so called on account of its being a little poisonous to some. JOHN L. MAXWELL.

Guilford, Vt., 1858.

—

TO PROTECT PEACH TREES FROM BORERS.

Remove the earth from the base of the tree, in such a manner as to leave a hollow around the tree, into which pour boiling water. This process should be repeated two or three times during the summer. M. A. HAWLEY.

Loda, Ill., Feb., 1858.

For the New England Farmer.

EGYPTIAN MILLET.

MR. EDITOR:—The Egyptian millet I have found much preferable to any other crop for feeding green to stock. Two or three crops can be obtained in a season, as it springs immediately up after being cut. Cows, horses or hogs eat it readily and thrive upon it. I have raised it for the past three years with a view of testing its actual value for soiling, and will give my experiments, leaving the reader to judge of its value.

In 1856 I sowed 10 rods to the millet; about the last of July commenced to cut and feed to five cows each morning, for six weeks. This was at just the time when the pastures were dry and feed usually short. The cows were turned to pasture each day, till it was estimated that we made ten dollars worth more of butter in consequence of the 10 rods of millet. This season I sowed one-fourth acre to the millet and fed to a yearling bull, which gained in a few days over four months 320 pounds, or about 2¼ pounds daily. Stock fed upon the millet a short time prefer it to the best hay. I think it well adapted to feed

to cows to increase their milk; it is sweet, and consequently must be nutritious. The seed is about the size of clover-seed, and from one root I have counted 24 stalks as large as a man's finger, and will grow, if not cut at all, from 8 to 9 feet high. I furnished seed to farmers in small quantities last season in different parts of the country, and as far as heard from, it is pronounced the best crop for soiling purposes. Where pasturing is short, many are obliged to keep their cows up all summer, and many who have pastures would find it greatly to their advantage to feed some green crop to their cows once a day, during the dry season, which most always occurs in August. I first saw the seed in South Carolina, and have some on hand, which I will send to those who wish to try it at a reasonable price. One pound of the seed is sufficient for thirty rods.

FRANKLIN H. WILLIAMS.

Sunderland, Mass., 1858.

REMARKS.—The article accompanying this, on the culture of the Chinese Sugar Cane, we omit because we have already given that subject so much room and prominence, that other matters demand our space, for the present, at least.

For the New England Farmer.

SALT MARSHES.

Improved by Drainage—Cost of Drainage—Value of the Mud—How to Compost it—Where to use it, and a promise of more light.

MR. EDITOR:—Farmers who live near the seacoast, seem to me, never realize all the advantages within their reach; vegetable matter from the ocean, mud from rivers and creeks, and sods from the marshes are all valuable fertilizers; a few facts in relation to my own practice the present season may be of some value to my brother farmers.

In November I employed a man to cut ditches on my salt marsh, thirty inches deep, eight wide and two hundred and twenty rods in length. I paid the usual price in this vicinity, ten cents a rod for digging and piling the sods so as the tide could not float them away. This winter one of my neighbors who had but little to do, agreed to cart the whole, two miles, to my barn cellar, for twenty-five dollars, which he has performed to my satisfaction. Thus you perceive I have more than forty cords of a valuable absorbent, in the right place, and my marsh ditched for the sum of forty-seven dollars. I consider this material from the salt marsh preferable to that from the fresh meadow, as it is a finer and more thoroughly decayed vegetable matter, and the salt it contains renders it more valuable. The manure of twenty cows is dropped into the barn cellar, the urine saturates the sods, the hogs root over the mixture and eat the roots of the grass contained in the sods with great apparent relish, and the whole becomes quite equal to fine cow manure, particularly when applied to gravelly or sandy soils. The salt marsh is greatly improved, and according to my former experience, will increase the value of the crop of hay in quality and quantity.

I may at a future time give my views in relation to mud as a fertilizer, to be obtained from creeks and rivers. N.

Dorchester, Jan. 8, 1858.

FIFTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE FARMER BY ZENAS T. HAINES.]

At the fifth regular weekly Legislative Agricultural Meeting, last Tuesday evening, the topic of discussion was, "*The renovation of worn-out soils.*"

The meeting was called to order by Senator FELTON, of Worcester.

Senator METCALF, of Worcester, presided. On assuming the chair he remarked that it had been said that he who made two spears of grass grow where one grew before was a public benefactor. He presumed there were gentlemen here capable of telling how that thing could be done.

Senator FELTON thought the pastures of Massachusetts needed renovation. About forty years ago, they would carry about double the stock they do now. He knew farms in his own vicinity where this was the case. How should they renovate these lands? Some had used leached ashes and guano, but he believed to little purpose. Some recommended compost and barn manure, and plowing and seeding; but our rocky pastures could not easily be plowed. He believed that they could be renovated to a great extent by keeping sheep upon them. They destroyed briers, bushes and the troublesome indigo weed so prevalent in our pastures. He had no doubt that plowing and manuring, where it was possible, would produce fresher and richer feed. He had known this tried with very excellent effect.

Mr. RICHARDSON, of Franklin, said a great proportion of the lands in his vicinity, particularly the pastures, had greatly deteriorated. He had a comfortable share of such lands on his own hands. He had a pasture which had commenced growing to bushes. He decided to let one-half of it grow to woodland, and eradicate the bushes from the other; this he plowed and cultivated with profit. He subdued the bushes by summer tilling, and avoided turning in his cattle till the grass was well set. He generally sowed some kind of grain with the grass seed.

Deacon ALLEN, of Oakham, thought farmers went over too much land. He liked the idea of letting worn-out thin land grow to pines. He had noticed that plowing thin land in the vicinity of pine trees operates to catch the pine seeds, which germinated and grew with great rapidity. When a boy, he saw in Braintree thirteen cows and a bull more than amply provided with feed from ten acres of land, which to his mind, was strong proof that a little land well cultivated was the true system.

Mr. FELTON inquired if this was worn-out or well-cultivated land at the time it was first used as a pasture. Deacon ALLEN had understood that it was always well cultivated, and deeply plowed.

Mr. DENNY, of Barre, had cultivated carrots and fruit on gravelly soil by deep tillage.

W. J. BUCKMINSTER recommended mixing soils as the most available means of renovating worn-out lands. If there was manure enough the problem would at once be solved, but there was not. He would add sand to clayey lands, and clay to sandy lands. There had been remarkable results from covering soil, by which saltpetre and nitre was engendered. Keep something growing and keep turning in green crops. This would very much benefit the soil. If the process of growing could be kept up, something would be growing. It was their business to know by what process soils would grow stronger or weaker. Deep tillage was important, for it enabled the air to permeate the soil and deposit its gases. The atmosphere was the great renovating store-house. Burnt materials, as burnt clay, were good for soil. Pulverized granite was also good. The soil asked but little beside the atmosphere, if the plow was kept going.

Mr. SPARHAWK, of Boston, wanted to know the cause of the deterioration of our pastures. Young cattle took from a pasture different elements from those taken by fat cattle. Cows again took different elements from either of the others. A young animal takes from the soil much nitrogen, which goes to form the bone, horns and hair. Cows consume the important ingredient of phosphorus. Fat cattle take no carbon. A compost of liquids, muck, ashes, salt, &c., was the thing needed on worn-out pastures. It depends upon your pasturage whether you make good butter and cheese. Sand was an important fertilizer, but it must be combined with potash.

Mr. HOWARD, of the *Cultivator*, thought the plan of renovating pastures by compost manures could only be available in exceptional cases.—Draining was an important desideratum in redeeming this class of lands for the purpose of getting rid of a deposition of substances on the subsoil injurious to vegetation. Among these substances was iron, which could not be decomposed except by draining or subsoiling. Next to draining, irrigation might be of great advantage. Water consisted of various elements, and it was only a certain part of these that were beneficial. Running water best contributed these fertilizing elements. Among the fertilizers, wood ashes composted with muck would operate favorably upon granitic soils. So of plaster. Guano had in some instances quadrupled the crop of grass on moist pastures. He had known farmers to pen their cattle at night, and then apply the droppings to those parts of pasture land most in need of manure. It might be well to use the plow, if manure was to be plentifully applied: otherwise it would be better not to plow. He believed we had much land in Massachusetts upon which no attempts of renovation should be made—lands which would be worth more for wood. This discrimination should be used in regard to this matter. As a rule, manures must be made on the lands themselves.

Mr. SHELDON, of Wilmington, said a good many years ago, farmers plowed up their worn-out pastures, and sowed them to rye and grass seeds. But railroads had made wood valuable, and the farmers in his section had found it the best policy to let their worn-out pastures grow to wood, turn out some of their fields to pastures, and then redeem swamp land for potatoes, &c. They had found it more profitable to clear their swamps than to redeem their pastures. Worn-out lands in his section could be bought for $10 an acre, and it would pay, he thought, more than the interest of the money in wood. The speaker alluded to the great supposed loss of ammonia. He thought it was not all lost, but that the atmosphere took it up and returned it to the soil. Those disagreeable east winds of the spring months carried ammonia back on the farms faster than a four ox-team could do it. To show the practicability of turning worn-out pastures into woodland, the speaker mentioned a case within his knowledge, where in thirty years wood grew from the seeds at the rate of forty cords to the acre.

Rev. Mr. SANGER, of Dover, remembered that thirteen years ago this winter, the subject of discussion was worn-out pasture lands. Gov. Lincoln presided, and recommended the harrowing of such lands. In Norfolk, Plymouth, Barnstable, &c., he would let such pastures grow up to wood. It would be more profitable than money at compound interest. Mr. Morrill, of Pembroke, had tried this with great success.

Mr. HAWKS, of Deerfield, said the gentleman who recommends the application of compost manures to pastures didn't say how much it would cost. He thought it would be rather expensive, and that it would be better policy to let worn-out pastures grow up to wood. He had found a bushel of plaster to the acre on hilly pasture land to work very beneficially. We carried on too much land. It was better to raise 80 bushels of grain to the acre, than 40 bushels. In the interior plaster was worth about 40 cents per bushel.

Mr. CHENEY, of Holden, thought plaster the cheapest fertilizer for our pastures, unless the soil was sandy. On hilly lands where there was a clay subsoil it worked profitably in producing white clover.

Hon. Mr. RUSSELL, of Princeton, wished to confirm the remarks of the two last gentlemen. He never raised better potatoes than on pasture

land, with no manure save a little plaster in the hill and on the vines. He had tried growing wood on such lands with great success.

Rev. L. FARNHAM, of Boston, recommeneded the application of clay to sandy soils. His father had tried it with great profit.

Mr. SPARHAWK said a compost suitable for the renovation of pasture land could be made economically. Liquid manure, soap suds, &c., would all work in.

Mr. BUCKMINSTER had heard of the excellent effect of plaster upon grass land as near the sea as Roxbury.

Senator ADAMS, of Middlesex, thought a compost of manures as suggested by Mr. Sparhawk was highly beneficial for fields.

Mr. HOWARD had found that plaster had operated favorably near the sea in the State of Maine.

Mr. FELTON thought there was no great difficulty of renovating worn-out lands if they could be plowed and meadow muck and compost manures obtained. On the hills he would let sheep run, and also apply plaster. He had not been generally successful in the general use of plaster. On his farm, in Worcester county, there was but one corner where it operated.

The chairman had read of a Scotch peer who set out 5000 acres of pasture to oak trees. Before this he had rented the land for a shilling an acre, but the presence of the trees improved the grass, while the timber accumulated to the value of millions of dollars.

Mr. FELTON here announced that the topic of discussion at the next meeting would be, "*Neat Stock.*" The meeting then adjourned.

For the New England Farmer.

YOUNG MEN AND THE FARM.

Before asking "Farmer's Son" a few questions that may be of use to himself and others, let me beg of him to get rid of the absurd idea of men and women being slaves. God intended that all should earn their bread by the sweat of their brow. This he will find to be the case if he would succeed in any occupation. His complaint of want of time for study is admirably answered by the remark of a late traveller and missionary in Africa who has attracted much notice in Europe lately. He says that until he was 17 he had to work in a cotton-mill to assist his mother and educate himself, and that while at work he studied Latin, &c., &c., proving thereby in such cases as "Farmer's Son" refers to, that "where there is a will there is a way."

Now to the questions,—How many acres are in the farm? how many are cultivated? how far are you from a market? how many sons are there to cultivate the farm? have you ever thought or looked about you to see in what way you could make your father's farm (old man's farm is too grossly disrespectful) yield twice as much as it does now? have you ever thought that if you can make one cow yield 60 dollars per annum, you get the interest without any risk, of $1000, and if your farm will support 20 cows, you have more than an average income on $20,000 cash and no risk? If the hive is too small you must swarm. I know of no business so likely to succeed, or is at this moment more wanted, than good farmers; if they are honest, careful of their tools and thoroughly understand their business, they will not be like most young men who leave the farm for cities, ruined or broken-hearted for want of employment. Should they take a wife with them, who also thoroughly understands the work of a farm, is cleanly and willing, they will be all the more welcome.

When "Farmer's Son" has answered these, I will try to answer him, and at the same time poke a few more at him. D. C.

Roseville, Del., Jan., 1858.

For the New England Farmer.

PUMPKINS AMONG CORN.

In the *Farmer* of February 6, in answer to certain queries of a correspondent, you express some doubt whether "any gain is made by the introduction of the pumpkin into the corn-field." This question belongs to a class in practical farming which can never be settled by theory. Careful experiments, made under different and adverse circumstances, can alone settle them. And it is to these experiments that every intelligent farmer ought to contribute something for the general good.

The question of utility in cultivating corn in the same field with pumpkins, is not by any means raised now for the first time. It is older, to my certain knowledge, than the "Missouri compromise," and may date back, for aught I know, to the first hill of corn and the first pumpkin. As a general rule, I am opposed to mixed crops; yet there are exceptions to all rules in farming, and I think this matter of corn and pumpkins is one of them. I would not knowingly, do anything to disparage the value of the corn orop, for I hold it to be by far the most valuable grain crop of New England, and indeed of any other country whose climate is adapted to it, and whose soil will not produce wheat as a staple.

I recollect very well that my grandfather had all the old-fashioned prejudice in favor of raising pumpkins, and would plant them among corn, potatoes, and even beans, if the soil was rich enough to hold out any prospect of a crop. My father, on the other hand, doubted the value of pumpkins, and was especially opposed to anything that could, by any possibility, detract from the product of his corn-field. With these opposing views upon the same farm, you will perceive at once that there was a necessity for trying an experiment; for "a house divided against itself" could not stand forty years ago any better than it can now. Accordingly, in the year 1818, I think it was, the corn-field was equally divided by two or three rows of potatoes through the centre, and one-half planted to corn *with* pumpkins, and the other *without*. There was no perceptible difference in the growth of the corn, and when the field was harvested there was not a difference of three bushels in the quantity on each

part, although the whole field embraced an area of four or five acres. Eleven large loads of handsome pumpkins were considered by my grandfather as a weight of evidence in favor of his theory (or in other words, *his* side of the cornfield) which could not well be resisted. I believe my father, ever after that, planted pumpkins with his corn.

It seems to me reasonable that a plant so well adapted to the shade as the pumpkin, and one which receives so large a share of its nutriment from the atmosphere, can be planted with corn, without injury to the latter, and without much detriment to the soil. Indeed, it is held by some intelligent farmers that the large leaves of the pumpkin, by shading the ground, and thus preventing the sun from dislodging the various gases which decompose and form soluble matter in the soil, to be taken up as food for the growth of plants, are a direct benefit to the land, to say nothing of the value of the pumpkin crop. It is well settled, I believe, that pumpkins, fed out, *without* the seeds, in moderate quantities, to milch cows, impart a rich flavor to the milk. It is also conceded that they are very valuable in fattening beef. Let them not, therefore, be given up, without some tangible evidence of their inutility.

Somerville. E. C. P.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Lyons, in France, Aug., 1857.

MY DEAR BROWN:—Perhaps it may not be thought best to fill the agricultural part of the *Farmer* with accounts of my wanderings, and I will endeavor to hasten as rapidly as possible over my journey from Leuk, or rather the Baths of Leuk, for they are separate places, on to my present resting-place. There is a great deal that relates to agriculture, in observations upon the face of the country and the habits of the people, the use of donkeys and men over mountains, the railways and highways and rivers, though little be said of plowing and hoeing, and I feel sure that if I can but bring before the minds of our readers the scenes that were all along presented to me, they will have an interest and utility, worth the space they occupy. At the foot of the Gemmi Pass, after a walk of three or four hours, although our labor had been far more severe than on any previous day, we were all so fresh and vigorous that we did not even sit down, before we made a visit to the Baths, the famous Baths of Leuk.

We entered a large stone building of no particular style of architecture, and were met at the door by a man, who told us to take off our hats when we entered, and be sure and shut the door as soon as we passed through, and stay as long as we pleased. We entered, and the sight that met our vision was worthy of the times of the Arabian Nights.

The room is perhaps sixty feet square, and covered with water about three or four feet deep, except a walk of a yard or so in width through the centre, leading to a door opposite. In this water, which is as warm as one can conveniently live in, were, when we entered, thirty-five persons, with only their heads above the surface. There were young men and maidens, children of all sizes, old men and old ladies, all parboiling in the same water. Two young gentlemen were playing at chess, on a floating table, which was level with their chins, two others were taking a lunch of cake, with a bottle of champagne, occasionally projecting a wet white hand from the flood, taking a sip, or touching glasses in the German fashion of drinking health. A young gentleman and lady in a corner were evidently holding a confidential conversation, and a young girl of five or six was frolicking with a gentleman, probably her father, and making sport for others around. These people were dressed in woollen dresses of various patterns and colors, with bare feet which glanced in the water like silver fishes, as they moved about.

Their locomotion seemed neither swimming nor walking, but a sort of gliding. They had, I thought, a sort of float on which they rested, and pushed themselves about with their feet. Occasionally a side door would open, and in would float a new personage, who would be politely greeted by all in the bath, and another, perhaps, would go out, always with some sign of farewell to those behind.

The water is from hot springs, and is changed every night, and suffered to cool, it being too hot as it comes from the mountain, for comfort. The bathers come here for the cure of certain diseases, rheumatic and cutaneous, as near as I could learn, and they stay in the water, after gradually getting used to it ten hours a day. Some of them were swimming as if in a river, and many spirting water into the air, by squeezing their fingers in a peculiar way.

The young ladies looked several of them very pretty and clean, and afterwards when I recognized the same persons at the table at dinner, clothed like other people, I could see nothing to indicate any disease, or any effect of this singular remedy, which, perhaps, is the best evidence of their cure. We afterwards went into other baths of the same kind, close by, and saw sixty or seventy persons together in the same manner.

On the same day, we walked two miles to see "The Ladders," as they are called, an arrangement as peculiar as the Baths. The Gemmi Pass is said to be seven thousand feet above the level of the ocean. The Baths are at the foot of the Pass, but still some three or four thousand feet above the sea. The village of Leuk is about nine miles below the Baths, and is reached by a good carriage-way, down a constant and rapid descent.

Away up on the left of this way, as you go from the Baths to Leuk, is a small village, on a mountain, where amid a fine tract of pasturage, and some good tillage, there is a population of several hundred. These villagers have no means of reaching the Baths, which are much resorted to by invalids, and tourists in summer, and of course, furnish a good market,—by any highway, without descending a steep path, and going up many miles by the carriage-way.

About two miles, however, from the Baths, is a precipice, several hundred feet in height, up the side of the mountain where the village is perched, and to save distance, ladders have been placed up and down this precipice, which is nearly perpendicular, and the villagers use them as their common way to and from the market at the Baths. We went to the foot of the ladders. The first one goes up, perhaps, thirty feet, and then there is a resting-place on a cliff. Another goes twenty or more feet to another landing on the natural rock, and so on, it is said, several hundred feet. And up and down these ladders, by day and by night, all the people of the village, young and old, male and female, carry their fruit and fowls and other products of their farms, and their purchases at the shops at the Baths.

We saw an old man and boy with large baskets of sticks, that had been gathered in the wood at the foot of the ladders, and which they were carrying up the ladders to their houses on the top, to use for fuel. They strap these baskets on to their backs and shoulders, so as to use their hands on the ladders, going up and down with their faces towards the wall. Nothing on my whole journey has given me such an impression of utter poverty, as this poor old man and boy, climbing those hills in this way, with a few sticks not worth the picking up at the door in our country, spending all their day, probably, for a single armful of fuel.

Winding along down to Leuk, through a strangely picturesque route of mountains and gorges, now on the brink of a gulf a thousand feet deep, and now in a tunnel through a rock, doubling backwards on our course to follow the mountain stream which we crossed several times, on beautiful bridges, we came to one of the great roads constructed by Napoleon, over the Alps, called the Simplon Road. It leads from Valais to Piedmont, connecting Switzerland with Italy, is thirty-six miles in length and twenty-five feet in width, and is a good carriage way, over a mountain pass more than ten thousand feet high. It leads over steep precipices, through galleries hewn in the solid rock, across mountain torrents, by bridges, and is altogether one of the greatest wonders of human labor and energy.

We struck this road near the river Rhone, which we followed along for many miles. The general aspect of the valley of the Rhone is barren, but the hills are covered with grapes grown on terraces, wherever the exposure to the sun permits their culture. I counted on some of these hills, which may perhaps be called mountains, forty terraces, rising one above another. There are also good fields of Indian corn, the best I have seen in Europe. At Sion, some twenty miles from the Baths, we stopped to dine. As we entered the hotel, we noticed a peculiar and disagreeable odor, and while waiting for dinner, we several times closed the door to exclude this strange perfume. At dinner, among other delicacies offered us was chamois, a dish which we all wanted to try, because chamois are peculiar to the Alpine regions, and considered a great delicacy. The chamois came on the table, and it required no organ but that of smell, to satisfy us that we had been on scent of that game since we first entered the hotel. The chamois was ordered off untasted.

However, in justice to this beast, it should be said that a day or two after, at Chamouni, we not only tasted chamois, but found it an excellent dish, and our conclusion is, that the chamois at Sion died about a month sooner than he ought to have died in order to be in good condition for our table. We saw wine for laborers advertised here at Sion, at six cents a bottle, a price, by the way, that need not surprise us when we remember that good cider is often sold in New England at two dollars a barrel, which is about six cents a gallon.

After riding forty-five miles to Montigny we walked nearly five miles and back to see the Pissbach Falls, said to be very beautiful, and found them not half so well worth seeing as Mr. Lowe's factory dam at Exeter, in a freshet. The great difficulty with all the cascades and cataracts hereabouts is, that they have not any water, except in the spring. And this brings us to another mountain pass, over which we will journey in my next letter. Yours, H. F. FRENCH.

WINTERING LAMBS.—The food and treatment applied to calves will succeed equally with lambs. If they get ticks upon them, Scotch snuff distributed along the back, by opening the wool, and rubbing it well in, will destroy the ticks. Do not crowd too many lambs together, and be careful to separate the strong from the weak. All animals are selfish, and have no sympathy for their inferiors. The larger, of whatever kind, will overrun the smaller, drive them from their food, and starve them out altogether. Old or weakly sheep may be wintered in the same stables or sheds with lambs; for, if the old sheep be larger and stronger, the lambs are spryer, and can better dodge about them for their food. They all require fresh air, and plenty of it. Dry cold never

hurts a sheep, but rains in winter are frequently injurious, particularly if of open-wooled varieties, as they soak to the skin, and give them severe colds. A severe snow storm, if dry, is less hurtful than a warm rain, and a sleet is worse than both together.—*American Agriculturist.*

For the New England Farmer.

LIGHTENING THE BURDENS OF HOUSE-KEEPERS.

MR. EDITOR:—Your Gardner correspondent, Mrs. Barlow, may not fully apprehend me after all, when she compliments me on my efforts to lighten the burdens of woman. For since it is a scriptural injunction on us all to bear one another's burdens, it was not so much my object to lessen or lighten the toils of woman, in the aggregate, as to change the form of these toils. I was anxious—and still am so—to have what I call woman's sacred fire expended more wisely than it usually is when she is enslaved—bound hand and foot and heart too—to custom and fashion.

Woman may, like her compeer, sometimes work too hard; but I doubt whether she as frequently works too much as too little. She works too much for the body, in my opinion, and too little for the mind and heart, particularly the latter.

When, however, I say she works too much for the body, I mean for certain departments of the body. Too much is done for the brain, stomach and skin, too little for the lungs, heart and muscles. Appointed, though she is, to elevate and purify and ennoble humanity, by her misdirected efforts she depresses it and degrades it.

Pity, indeed, it is that she who has it in her power to raise man—the grace of God assisting her—to capabilities which no angel or seraph knows, should, by her mismanagement, so often sink him below the beasts that perish. Pity that while her whole nature is tenderness and love and purity, her mistake, in education—especially in physical education—should tend to the opposite of all these, viz.: to cruelty, hatred and sensuality. Yet is this not the usual result?

How can a child be other than impure and brutal and cruel, whose blood is made so stimulating as to over-excite, and in truth over-heat and irritate the heart and all the vessels connected therewith through which it is continually sent forth?

I would lighten the labors of cooks and dress-makers, and consequently of those mothers who are their own cooks and dress-makers—if, indeed any such mothers are left to us. That cookery is for the most part unnecessary and even hurtful, whether done by one person or another, seems to be conceded in giving currency to the old adage, "God sends meats, but the Devil sends cooks;" but we have as yet, so far as I know, no equivalent adage or saying with regard to dress-making. Perhaps it *might* be said, that God sends us clothing but Paris sends us dress-makers; or clothing comes to us from God, through the windows of heaven, but dresses come from Satan, through the chambers of death at Paris and London.

When I speak with doubt whether we have any mothers left to us who are cooks and dress-makers for their children, I may seem to some, after all, to utter a slander. But is it so? Fifty years ago, mothers with the aid at most of elder sisters, were both cooks and tailors to their own families, in many parts of our country; but now how is it? Not one mother in a hundred is tailor in her own family; and I do not believe that a majority of our mothers do their own cooking. I know of one mother in Massachusetts who fills with her own hands both these offices, and I believe there are more; but they are becoming scarcer and scarcer every year. If things are to go on for the next fifty years as they have done for the last fifty, I know not what we shall come to. If the devil now sends us cooks and dress-makers, whether they come straight up from the nether regions or come by way of Paris and London, what shall hinder him, ere long, from sending us shoe-makers and carpenters and farmers—aye, and school-masters, too, and other teachers high and low? Extremes, it is said, sometimes meet. Lawyers have, for sometime past, been regarded as Satan's emissaries; doctors are beginning to be thought so, and ministers are by some suspected—what are we coming to?

I would return, not to nature in a savage or uncultivated state, but to nature in her simplicity. Mothers are the natural teachers and educators of their own children. They are, of course, as physical educators, the natural cooks and dress-makers of their children. I do not say that there are no circumstances in which these same offices can be delegated; for there are such.—These, however, are the exceptions, and not the general rule; and as in other such cases, they seem to confirm and strengthen it, rather than in the least to invalidate it.

But how can mothers find time to do every thing for their children? you will perhaps ask. There is, in the nature of things, no real or intrinsic difficulty here. My own mother had no advantage of birth or education or fortune beyond the women of her time. Early thrown upon her own resources, she came to the head of her family in the deepest poverty, except of mind and heart; yet she educated four children. She was for the most part—that is, as a general rule—spinster, weaver, dyer, tailor, cook, physician, nurse, teacher and general housekeeper. Nor was she alone. Fifty years ago, as I have intimated already, there were many more like her.

I will not say that my mother is the standard—midway between a savage and a cultivated state—to which it is needful to return; but I do say that a return is necessary, to something like it. Nor do I say that the golden age is past, and that all things earthward tend. I am not yet old enough to see everything in the retrograde. But I do say that just in proportion as we depart from nature's simplicity—not nature's barbarity—in any society whatever, we begin to have among us those materials which give rise to peace societies, temperance societies, moral reform societies and charitable societies and charitable and home institutions.

There may be no harm in buttering my bread, apart from the fact that butter seems to be the result of a degree of putrifaction, provided human time could not be more profitably employed than in making a better article into one which is worse, and provided the wants of society everywhere, physical, social, intellectual and moral, were well

supplied; but I wish Mrs. Barlow or somebody else would tell me by what right we spend precious time—God's precious gift to man—in changing articles from better to worse and in preserving them with great pains and care, while there are so many around us in the world who need something more essential to earth and heaven both than butter. I should like to know by what right we are at the pains to make butter and spread on our bread and—*monstrum horrendum*—mix it in almost all our dishes, while thousands and millions have not bread (of earth or heaven) even without any butter to eat, or raiment (moral or spiritual) to put on. Your correspondents must know that I am not insensible to compliments on the one hand, nor to reproach and ridicule on the other. I have other reasons for my remarks, both here and elsewhere, than the love of approbation.

But I have run on at greater length than I intended. Mrs. B. and others must be a little cautious about calling me out, if they have a strong antipathy to long articles. W. A. A.

Auburndale, March, 1858.

For the New England Farmer

VALUE OF MUCK.

The compost heap is of great importance, and could every farmer realize its worth, one extra link would be added to the chain of agricultural improvement. Facts will convince many a stubborn will. And facts enough can be obtained to wake up any farmer to a sense of the importance of using muck.

In the year of 1850, my father had a piece of land, worn out by continual cropping. Having plenty of muck, fifty loads were hauled and emptied with ten bushels of ashes to the load. A hole was then dug in the centre, and three barrels of stone lime was put in. Water enough was poured on to slake it. The lime was covered with weeds, straw and muck. In the fall it was drawn out and thoroughly plowed in. The next spring the land was sown to wheat and stocked down. From the two acres that the compost was spread on, we harvested forty bushels of nice wheat. Since then the land has produced good crops of hay, and worn better than land manured with long manure the same season.

The winter is an excellent time to haul muck if preparation has been made before by shoveling up. Mr. HOLBROOK'S practical answers to Mr. Dimon's questions are of great value, and farming in New England can be and is made profitable by the scientific farmer. MAPLE.

Caledonia Co., Vt., 1858.

A NEW TREE PROTECTOR.—Many contrivances have been resorted to in order to protect our fruit and even ornamental trees from the ravages of insects—particularly the canker worm, who has annually denuded a great many of the finest trees in this State. The article of which we now speak is a new device, and we think will outwit any bug that "cannot take wings and fly." For if he ascends the stem of the tree, he soon finds an effectual stopper; and if he descends by the trap, he is surely a "gone bug." He may ascend the trunk of the tree, up to the trap, and descend again as many times as he pleases, if that is any comfort to him, but he can only reach the branches of the tree by his wings. It cannot fail, we think, to prove effectual. It is simple in its construction, and extremely cheap.

It is the invention of Mr. JOSIAH FOSTER, of Sandwich, Mass., who is ready to dispose of rights for towns or counties, at moderate prices, on application to him in person or by letter. As a portion of the Protector is made of tin, workers of that article will be proper persons to manufacture them. A sample may be seen at this office.

For the New England Farmer.

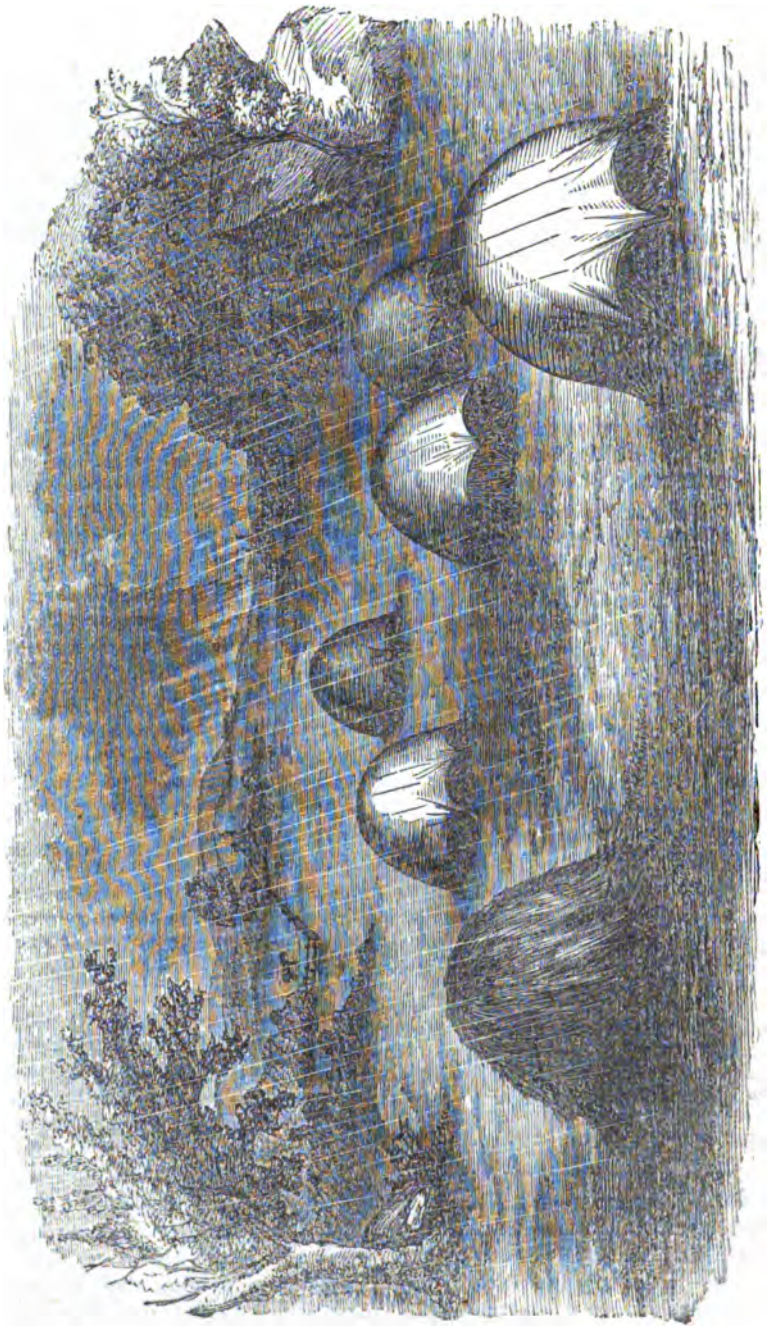
LABOR OF BOYS.

Is it worth anything or is it not? At the State Reform School the moderate allowance of *ten cents* a day for each day's labor has been made, and those who have made it complain that this is a reason why they cannot make both ends meet, on the farm. We see it reiterated in all the papers, that at the late meeting of the Board of Agriculture, it was concluded that the labor of the boys was no benefit. In fact, I have heard this distinctly averred by prominent members of the Board. If this be so, there must be *a stitch down* somewhere, either in the government of the boys or in those who superintend the labor.

In my neighborhood, from the first of April to the first of Nov., the labor of active, healthy boys from the age of *ten* to *sixteen* years is in great demand, and such boys will command half as much wages as common men. Why, then, cannot boys on a farm in the county of Worcester be made to earn their living as well as in the county of Essex? Will it be said that the boys at the Reform School are not generally so old as those above named? But surely out of six hundred, one hundred, at least, can be found of this age. My interest in the success of this Institution, must be my apology for these suggestions.

February 6, 1858. ***

REMARKS.—We are no less surprised, than is our correspondent, at the statements we have seen in the public papers, purporting to give the proceedings of a meeting of the members of the Board of Agriculture, that the labor of the boys on the farm attached to the Reform School is *a bill of cost to the Board, at ten cents per day for each boy!* If this declaration is sanctioned by the Board, we believe it labors under error,—for we do not believe that every hired man on the farm during weeding time last summer, could have tended the root crops alone that were raised. We certainly should be glad to pay 15 cents per day for such boys in weeding time, and pay for superintending them. We hope the Board will correct the error, if it be one, or show us the facts to sustain the assertion.



CAPS FOR COVERING HAY AND GRAIN.

CAPS FOR COVERING HAY AND GRAIN.

"See that big black cloud, in the west—how steadily and majestically it approaches us! There is something besides thunder and lightning in it, too. See, how it attracts the smaller clouds, increasing its own volume as it moves on; by the time it comes over our fields we shall have a drencher; well, boys, the corn-fields need it, and it wont hurt *our* hay, as it is all *under the caps!*"

Farmer Jones was right—that "drencher," wind and all, did not hurt *his* hay, and he got it all in the next day, while the hundred cocks of his neighbor Anticap had to be spread and cocked again! The verdict of an honest jury would be, "sarved him right, he was able to procure caps and wouldn't—didn't believe in 'em."

No man who investigates the matter, can fail to come to the conclusion that the use of caps for covering grain and fodder, is a matter of strict economy; and we believe no man who has used them one season has been known to lay them aside. Some object to using them, saying they cannot stop to put them on when a shower is coming on; the objection is not valid, because they have had no experience in the matter. Mr. E. EMERSON, of Hollis, says:—As to the work of putting them on, I will go into the field with any man of my ability to work, and *put up hay and cap it*, as fast as he can put it up so that it will do without a cap, as it takes twice the work to trim a cock without a cap that it does with one. Cocks of hay, or shocks of grain or stalks, put together only tolerably well, and covered with a piece of twilled cotton, will keep the cocks or shocks dry through any storms that we usually have in the harvesting season. A set of caps properly taken care of will last a life-time.

Some enterprising young men, Messrs. CHASES & FAY, Boston, are now preparing cloth to prevent its mildewing, and will furnish well-made caps at moderate prices and of any desired size. See their advertisement in another column.

For the New England Farmer.

CHESTER COUNTY HOGS.

Having learned from various sources that a breed of swine called the "Chester county Whites" was superior to most or all of the foreign breeds, for their early maturity, good form and quiet disposition, I procured a pair of them from THOMAS WOOD, Esq. of Penningtonville, Chester county, Pa., a celebrated breeder of these hogs. I am exceedingly well pleased with them. They are pure white, long body, with small, fine bone and square built. Mr. Wood informs me that the genuine Chester will make more meat to the offal, and to the amount of food consumed, than any other breed. They will fatten well at any age, and often weigh from 350 pounds to 400 pounds net, under a year old. When well fed to twenty months they will weigh 700 to 800 pounds. I am certain it will improve the stock of hogs in New England to introduce this breed among them. For beauty and symmetry of form they cannot be surpassed. Mine have been examined by good, practical farmers in this vicinity and pronounced very superior animals. In all points they excel the Berkshire or Suffolk.

Mr. Wood holds himself in readiness to ship pairs, not akin, to any part of the Union at moderate prices. His stock is of undoubted purity, and I would cheerfully recommend it to all my brother farmers who wish to make a judicious improvement in their breed of hogs.

WILLIAM A. WHITE.

Lancaster, N. H., Feb. 15, 1858.

A NEW BREED OF SHEEP.

D. J. Browne, Esq., the head of the Agricultural Bureau of the Patent Office, has received a very interesting letter from R. L. Pell, of Massachusetts, concerning a new breed of sheep which has been lately imported from China. Three years since, a Mr. Theodore Smith imported three ewes from Nankin, from which he obtained, in twenty months—three, four and five at a birth—and they commenced breeding at four and a half months old. This breed are perfectly hardy, having endured the past severe winter without any shelter, producing lambs constantly, which bore the cold as well as the old sheep, and matured rapidly. They will not jump fences, either stone or wood. The flock was separated last season from a rye-field by a cobble-stone wall two and a half feet high, over which they never attempted to pass, nor can they be driven over any description of fence. The fibre of their wool is exceedingly strong and the fleece heavy. The mutton cannot possibly be surpassed, as it is entirely free from the strong flavor usual to sheep, and is tender, juicy and delicious. The tails are broad, and when properly prepared much resemble marrow, and form a delightful morsel for the epicure.

REMARKS.—We have received several inquiries about the breed of sheep spoken of above. We know nothing of it, and never have heard of such a man as "R. L. Pell, of Massachusetts." Mr. D. J. Browne, of the Patent Office, is the person to inquire of in relation to the sheep.—*Farmer.*

MORTON'S NEW FARMERS' ALMANACK for 1858.—This is an English work, by JOHN C. MORTON, a gentleman of some agricultural celebrity. 36 of its pages are occupied by an agricultural history of 1857; 20 by a calendar of operations for the farm and garden: 20 by an account of the treatment of live stock under disease: and 12 by a calendar for each month. It is filled with a thousand matters of interest, not the least among which is the table of the duties which are levied on pretty much every thing but the air the people breathe. A man cannot build a house, hire a servant, or look out of the window, without paying a duty for it. For sale by A. Williams & Co., 100 Washington Street, Boston.

EXTRACTS AND REPLIES.

APPLE TREES.

Will you give the best method of preparing the ground to set apple trees in? What kind of trees is it best to set out for grafted fruits? Also, the best method of setting out, and the proper distance apart? J. H.

South Berwick, Me., March, 1858.

REMARKS.—Plow and manure the land as you would if you intended to get *fifty bushels* of corn to the acre; then dig holes *thirty* feet apart each way, from three to six feet across, and twelve to twenty inches deep. Throw the black, top soil into the bottom of the hole, and scatter the yellow soil on the surface, mixing a little manure with it if you can spare it. The Baldwin is as good a market apple as we have at present. The Hubbardston and Hunt Russet are good bearers and always saleable. The Danvers Sweet, Tolman Sweet and Russet Sweet are excellent varieties. The Massachusetts Transactions are probably for sale at the bookstores.

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STONE AND TILE DRAINS.

In your number of January 2, "E. G." inquires the comparative value and cost of stone and tile drains. I have watched since for an answer, but not having seen any, I will venture a few remarks. I see 5½ inch horse-shoe tiles and their soles are advertised at about one dollar per rod delivered in the vicinity of Boston; slate stone, for soles and coverings for the same size drain, will cost about the same, at the same place. The cost of the walls between the sole and covering, which can be built of cobble-stone, I leave for "E. G." to judge. Stone soles, 9 inches wide for 5½ inch brick tile, if they can be used so, cost about $23 per thousand, delivered as above.

JOHN L. MAXWELL.

REMARKS.—Our correspondent describes a kind of drainage which we know nothing of as applied to *farm* drainage. Such tile and stone as he speaks of are used as outlets of manufactories, for sewers, &c. In another column, Mr. FRENCH has an article upon the "*Comparative cost of Tiles and Stones*," which is clear, and corresponds with our own experience in some recent operations.

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CULTURE OF CELERY.

In answer to your correspondent, "Celery," of Johnson's Creek, N. Y., I beg to offer a few remarks:—

1. Make your bed of light soil, and to every barrow full of soil add five pounds of superphosphate of lime well mixed; when the plants make their appearance, dust them well with soot.
2. Rich, light, sandy loam.
3. The rows four feet apart—the trenches one foot deep—the plants six inches apart.
4. Put 800 to 1,000 lbs. of superphosphate of lime to the acre.
5. Hill the plants four or five times, and great care should be taken not to let any soil get to the heart of the celery; if it does it will turn the growth down, and will spoil all.
6. The best fertilizer you will find is superphosphate of lime.
7. I have found lime and soot mixed well together, and thrown lightly over, to answer well in this and the old country. Try it.
8. After rain you will find the best time to hill.
9. I know of no better way for winter keeping than taking the plants up and replanting in sand in the cellar. R. F.

Providence, R. I.

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EARLY PEACHES—SUMMER SQUASHES—MELONS.

Can you inform me which is the most profitable early peach to raise for market? "Cole's Fruit Book" recommends the Early Chelmsford, Early Malden and Tuft's Early, and in the third volume of the monthly *Farmer*, Mr. Cole several times recommended the Early Sturbridge peach very highly indeed. Can you tell me where that can be obtained, or give any other information respecting it? Do you know of any kind superior to either of these, and if so, where can it be obtained?

Which is the best kind of summer squash and early watermelon and musk melon? What do you think of Lucerne as a crop for feeding milch cows with in the latter part of the season? Is it better than Southern corn, and if so, why is it not more generally raised?

Clinton, March, 1858. OLD SUBSCRIBER.

REMARKS.—The *Royal George* is one of the best early peaches we have eaten. Under favorable circumstances they ripen about the 20th of August. *Crawford's Early* is a little later, but is a very fine peach. We suppose any of the nurserymen will inform you where the varieties of peaches may be obtained. We have had no experience with the Lucerne.

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CROWS AND CHICKENS.

Mr. Crow is a thief, and a bold one too, for he not only steals corn and eggs, whenever he can get a chance, but chickens also, of which I had convincing proof last summer. They would come within a few feet of the house and take off quite large chickens; even when the hen was with her brood and defended them, the crows would often take all from them. To protect the small chicks I had a straw man dressed and stationed near the coops, which kept them at a distance; but they never failed to bear off any that strayed beyond his protection.

Can you tell me the price of a good Ayrshire bull, two years old? J. J. E.

Sunderland, N. J., 1858.

REMARKS.—Bulls of the age you want, command from $40 to $100 each, according to make, size, &c.

FAT COW.—Mr. John E. Merrill, of Pittsfield, slaughtered on the 9th inst., a cow which weighed 1174 lbs. Mr. Merrill has also in preparation for the shambles a noble pair of Durham oxen, very heavy, which excite already the attention of beef fanciers.

SIXTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE N. E. FARMER, BY E. T. HAINES.]

NEAT CATTLE.

At the sixth Legislative Agricultural meeting, held last Tuesday evening in the Hall of the House of Representatiyes, the topic of discussion was "*Neat Cattle.*"

The meeting was called to order by Senator FELTON, of Worcester.

On motion the Hon. JOHN W. PROCTOR, of Danvers, was requested to preside, and complied. On taking the chair he made a few remarks, in which he expressed the opinion that the subject of neat stock was one of pre-eminent importance to the New England farmer. In the county of Essex, where he was most familiar, the subject was one of very deep interest. In his own opinion, the best stock for our farmers was the old red stock of New England, the descendants of those imported by our fathers. There might be some stock superior in certain particulars, but generally the stock alluded to was the best for our use.

Mr. HAWKES, of Deerfield, said a good deal had been said of the excellency of the milk of the Devon cow, but although the Devon breed might furnish excellent milkers, he preferred a larger kind of stock. The old Northumberland stock had proved the best in his region. He had one Devon cow which was valuable for the dairy, but not so valuable for stock raising as the Durham. In the upper part of Vermont, the hilly region, the Devon stock might be preferable.

Mr. HOWARD, of the *Cultivator*, said the term short horns was very comprehensive. The object of their early improvement was to produce the greatest quantity of beef in the least time at the least expense. It was obvious that the heavy cattle of the low lands were not suited to the high lands. The Devon was a very useful animal, but their characteristics were first for beef, next for labor, and lastly for the dairy. In New York, where there are more Devons than anywhere else in the country, they were more profitable than if they were the best adapted for dairy purposes.

Mr. H. C. MERRIAM, of Tewksbury, alluded to the seeming contradictions in the experience of those taking a part in the discussions, and thought they were attributable to the various geographical situations where agricultural experiments were tried. Hence these contradictions were rather instructive than otherwise. With reference to the subject of debate, a long and careful experience had convinced him that our native stock was greatly improved by an infusion of foreign blood. We are told to go to Worcester for fine native cattle, but there was not perhaps one single drop of pure native blood in all Worcester county. There had been no other place in New England where greater efforts had been made to introduce good foreign blood, and with better results. The speaker had used full blood Durhams for fifteen years past as working cattle. They were eminently docile, sprightly and lively. They were good walkers, quick and large. In Worcester and Middlesex counties, within the past twenty years, the speaker believed that working oxen had improved fully 15 per cent.; that this was the case with neat cattle generally throughout the State. As to what cattle it was best for us to keep, it did not follow that smaller breeds lived on less food than larger ones. He preferred the Durham for the simple reason that he could get more meat and money from them. He only fed them four times a day, twice on English hay and twice on coarse feed. This was not expensive keeping. His milk cows were treated to roots. The highest his cows had yielded was about 17 quarts of milk a day. On a thin, barren soil, the speaker would prefer a lighter stock than the Durham. He considered the Sutton cattle the result of a successful crossing. The Alderney cows are rich milkers, but that stock is not well calculated for work or beef.

JOSIAH QUINCY, JR., was at the great exhibition at Paris, where there were 1200 head of cattle of forty different breeds. He was surprised at the great interest and knowledge evinced concerning these animals. There were Hungarian cattle with horns a yard long, and others with no horns at all; there were Ayrshires and Short-horns. The Ayrshires took the premiums for milking properties, the Short-horns for fattening, and the French breeds, which were generally crosses of the English breeds, were awarded premiums for a combination of these qualities. The Englishman's test of value was the greatest number of cuts that could be taken from an animal. Mr. Quincy gave an interesting description of the exhibition, and a humorous account of the meagre show made there by the United States.

Hon. Mr. BROOKS, of Princeton, believed that we want to breed cattle as they do in France—breed for meat, for milk and for work. We were not prepared to separate the breeds. He believed that Mr. Merriam's partiality for the Durham was because he had practised most from them. He would not say that native cattle were better than foreign, but it was sometimes found they worked as well, and gave as much milk. There was mor elasticity in our native breeds. They had the spring that was needed to take a rock out of a hole. He believed the Ayrshire was as good for milk as any other breed; they were also a hardy cattle. His Ayrshire cows walked from Princeton to Boston, a distance of fifty miles, stayed a

week at the fair, and walked back, without falling off a pint from their usual yield of milk. Farming was a system and science of averages, and thus we must speak of averages. As a general rule, the largest yield of milk produced the least butter and the most cheese. The speaker thought a mistake was made in using the milk of the Devons, because from its superior richness, it was less healthy than the thinner milk of the Ayrshire and Durham. No man could make up or greatly improve a breed in much less than sixty years. The speaker had practised for twenty years, and could not count with any degree of certainty upon the result of his endeavors. As a whole the Durhams were not good workers. They could not back a man's hat off. It was considered by some that young bulls were the best for use, but the speaker did not consider the age a matter of much importance. For beef, in Massachusetts, the Herefords were better than the Durhams, whose fat was laid on the outside, and was tallowy in its character. They were better workers, as a general rule, than the Devon or Ayrshire.

Mr. HOWARD, of the *Cultivator*, said the qualities of beef were best determined by the English prices current, and it was found that first of all stood the Scotch Highland, next the Hereford and Devon, and next the Short-horns; the first being worth two pence more the pound, than the last.

Mr. W. J. BUCKMINSTER, of the *Ploughman*, alluded to the Jersey cow Flora, belonging to Mr. Motley, of West Roxbury, which yielded, in 12 consecutive months, 511 pounds of butter. These were the most extraordinary figures on record. He believed that the richest butter-making milk was not desirable for the table.

The subject for discussion at the next meeting will be, "*Drainage.*"

For the New England Farmer.

CROPS IN WISCONSIN.

MR. EDITOR:—This flourishing county has for its western boundary the Mississippi river, and has generally a rolling or hilly surface, and is naturally divided into timber, opening and prairie. The western part may be called mountainous or bluffs, rising from one to three hundred feet above the river. The soil is excellent, black marl predominating in the lowest timber and prairie lands, and is often four feet deep. The black land is the most common in the openings, and on the rolling prairies, and is cultivated with the best success. The climate is mild and salubrious, and is very healthy. The average crop of wheat last season was 25 bushels per acre. Corn 75 do. Potatoes 200 do. Vegetables grew with rapidity. Owing to the great range of pasturing on the hills and prairies, it is a fine grazing country. Manufactures are still in their infancy, although but few counties have equal natural facilities for extensive operations.

Our principal ports on the Mississippi river are De Sota and Victory. The last named place is where Black Hawk's tribe was at last defeated. Unimproved lands are held at from $3 to $10 per acre.

What a change has come over this new country in the short space of two years. At that time nothing could be seen but the rude log cabin, to shelter its inmates from the blasts of winter, and the scorching rays of the noonday sun. Now we can look abroad and see convenient structures by hundreds. Villages have sprung into existence, as if by magic; schools may be found in every part of this county. In fact every thing is taking a new shape. C. W. SANDERSON.

Badax, Wis.

"GOD SAVE THE PLOW."

BY MRS. SIGOURNEY.

See how the glittering share
Make earth's bosom fair,
Crowning the brow;
Bread in its furrow springs,
Health and repose it brings,
Treasures that mock at kings—
God save the plow.

Look to the warrior's blade,
While o'er the crimson'd glade,
Hate breathes its vow—
Wrath it unsheathing wakes,
Love at its flashing quakes,
Weeping and woe it makes—
God save the plow!

Ships o'er the ocean ride,
Storm wrecks their bannered pride,
Waves whelm their prow—
While the untroubled wain
Garneth the golden grain,
Gladdening the reaper train!
God save the plow!

Who are the truly great?
Minions of pomp and state,
Where the crowd bow?
Give us hard hands and free—
Cultures of field and tree—
True sons of liberty—
God save the plow.

A CHIMNEY.—Professor Faraday has shown the chimney to possess very important functions in sanitary economy. Thus a parlor fire will consume forty pounds of coal in twelve hours, the combustion rendering 42,000 gallons of air unfit to support life. Not only is that large amount of deleterious product carried away, and rendered innoxious by the chimney, but five times that quantity of air is also carried up by the draft, and ventilation is thus effectually maintained.—*S. American.*

MAKING WOOD FIRE-PROOF.—Professor Rochelder, of Prague, has just discovered a new antiphlogistic material, which promises to become of importance. It is a liquid chemical composition, the secret of which is not yet divulged, which renders wood and other articles indestructible by fire. Several successful experiments have been made, and others are promised on a larger scale.—*California Farmer.*

For the New England Farmer.

DRAINAGE.

COMPARATIVE COST OF TILES AND STONES.

MR. BROWN:—It is not possible to answer, with precision, the question so often asked, as to the comparative cost of drainage with tiles and stones. The actual cost of making two inch pipe drain tiles, in England, is about the same as that of making common bricks. When they shall be made in this country, as they soon will be, in large quantities, and with proper machinery, they will be sold at about the price of bricks, say five dollars per thousand, at the kiln. Now, they are sold at the works in Albany, N. Y., at Whately and other places in Mass., and at Exeter, N. H., at about twelve dollars per thousand. Tiles will lay about one foot each, that is to say, if you get a thousand, you may, after breaking and rejecting, have enough to lay a thousand feet of drain. Tiles are usually moulded fourteen inches long. They shrink in burning, from one to two inches, according to the hardness of the burn.

Under-drains should be four feet deep, as a general rule. They may be opened with proper draining tools, and usually are in England eighteen inches wide only at top, and three inches wide at bottom, but we will say, twenty-four inches at top and four at the bottom. The excavated earth will then measure not quite three cubic yards to the rod (exactly 2.85.) On my own farm, where we use a pick to loosen the lower two feet of earth, the cost of opening such drains and laying and covering tiles, is about one day's labor to three rods. The tiles at twelve dollars per thousand cost about twenty-three cents per rod. Call the labor one dollar per day, and we have the cost, about fifty-six cents per rod.

My estimate is upon hand labor entirely. If the first foot of the ditch be plowed out, the cost would be lessened. I have laid on my farm nearly a mile of tile drains, at a cost of about fifty cents a rod, calling the tiles twelve dollars per thousand.

Stone drains cost more or less, according to the mode of laying, and the convenience of the stones. To lay a regular water-course, of the smallest size, the excavation must be twenty-one inches wide, at least, from top to bottom, just fifty per cent. more than I have estimated for tiles, say fifty cents a rod in all. It will require, at the least, two ox-cart loads of stones to the rod, to construct any sort of a stone drain, costing say twenty-five cents a load for picking up and hauling. Generally it will cost twice that. I hardly know what to add for the cost of laying the stones, but will say twenty-five cents a rod, though it is probably too little. We have then fifty cents for opening and filling up, fifty cents for hauling stone, and twenty-five cents for laying, making one dollar and twenty-five cents a rod for a stone drain, or twice the cost of tile drains at the above estimate.

Then we have a large surplus of earth, two cart loads to the rod, to be disposed of, displaced by the stones, and in case of the tiles, we have just earth enough. There are many other considerations, such as the cutting up of the ground, if it be mowing, by teaming heavy loads of stones, the greater permanency of tile drains, and the fact that they furnish no harbor for mice and moles, all in favor of the tiles, but of those I will not now speak.

My conclusion is that the cost of tile drainage as compared with stone drainage, is less than one-half, even at the present price of tiles, which is double what they will be sold for within five years.

I make no estimate for laying the tiles, because a man can lay 100 rods a day, after the ditches are ready.

I am preparing careful estimates on all these points, and putting in form such information as I have collected, on the whole subject of Drainage, and hope at some future day to give the public the benefit of my researches.

Yours truly, HENRY F. FRENCH.

Exeter, N. H., Feb. 15, 1858.

For the New England Farmer.

IOWA—WEATHER—MONEY—CROPS.

"The month of winds and drifting snows" has come in Iowa. Up to the 1st of February (except a few days in November) we had most delightfully mild and pleasant weather. Since February came in, we have been having regular old-fashioned winter weather.

"The times," considering the almost entire absence of money, are only moderately "hard" with us; and now, we have a little gold and silver, plenty of shin-plasters, and a *great* plenty of corn and wheat, at 20 and 40 cents per bushel, with but few cash customers at that. But nobody goes hungry, and but few have suffered from cold, till winter is nearly gone and spring at the door.

We note that better times are returning at the East; and Hope bids us

"Wait a little longer,"

when we too shall again rejoice in the same.

I have but one fault to find with your otherwise always welcome *Monthly*. It is this: my little boy cannot wait patiently, for me to *cut the leaves open*. Now, if you would be so kind, in addition to other improvements, as to *trim* it for us, as our best magazines are now generally served, and as yours certainly *deserves* to be, I think the *New England Farmer* would be just about perfect. M. R. C.

Tipton, Iowa, Feb., 1858.

REMARKS.—The *Monthly Farmer* is of sufficient value to be preserved and bound into volumes—if the numbers were trimmed, the corners would

soon roll up and the edges become so ragged as to make it necessary to trim again when they are bound, and that would destroy the appearance of the book. One minute's time is sufficient to cut the leaves of any single number. Those who intend to bind the volumes ought not to trim them. Cannot you indoctrinate *a great many* of your neighbors with your good opinion of the *Farmer*?

For the New England Farmer.

LEAVES FROM A LADY'S NOTE BOOK.

1857, *November* 25, *Thanksgiving Day.*—What magic in the sound! what a world of ideal pleasure when looking into the prospective, does it sometimes mirror forth; but to me the shadows from the past come surging up through the imagination, filling it with visions of doctors and nurses, and sundry vials containing all manner of specifics known and talked of for the cure of "ills that flesh is heir to." When I was last able to walk abroad and look upon the fair face of nature, the grass was green, the leaves and the fruit were upon the trees, and the merry sunshine came dancing down in floods of golden light, as if defying the stern roar and bluster of winter; but days have since lengthened into weeks and weeks into months, to find me still the prisoner of a darkened room. As I would not, however, be too exacting, even in my dependence, on this—to us, descendants of the Pilgrims—the gladdest day of all the year, I am left alone from choice, that those who have sympathized with me in my helplessness, and smoothed for me the pillow of pain, weariness and langor, with a love and devotion untiring, may unrestrainedly enjoy, not only the "feast of reason and the flow of soul," but likewise take their fill of all the fat things of which I must partake only in imagination, and while all are occupied, I record the passing thoughts that occupy my yet weak brain.

Yes, alone, for the time—even my kind-hearted, grey-haired old physician, who has come so often with his noiseless steps and gentle, winning, fatherly ways, and laid one cool hand on my fevered brow, and the other on my throbbing pulse—has forgotten his accustomed visit, or perchance, some one whose necessities are greater than mine now are, has claimed his attendance; and while the flavor of the savory viands comes up from below to my quiet chamber, through the dim old staircase, mingled with the clatter of knives and forks, and the sounds of joy and glee, from the heart of happy childhood and youth, I am thinking what an army of the farmer's "cherished things" have disappeared, since the time when I could mingle with such a group, and relish the good things of life!

December 2.—A stray number of the *Farmer* has found its way to my table, and, though prohibited reading, I have taken a peep at Mr. Everett's oration at Buffalo, October 9. Who ever saw a finer passage than his "Evidences of God's interposing care on the farm?" and then there was Maj. French's letter to "My dear Captain,"—why, he gives just the same reason for writing to the editor that prompts me sometimes.

December 30.—Have been looking over the last number of the *Farmer*. I see Gov. Brown makes us to understand in one of his editorials, that he is not particularly fond of giving or receiving titles. Perhaps *he is not*; but if titles are well earned, there ought to be pleasure in wearing them. Our effusions, on the fair page of the *Farmer*, in juxtaposition with his and those of others, give us an honest pleasure and pride. Nothing can exceed the beauty of his remarks at the closing of the year—so natural and appropriate—and withal so friendly, and so full of kindness to his numerous patrons. I am wondering if he will get off that old Kossuth of his, the coming new year, in season to give us his bow,—or will it still "cling to his head like a wet nightcap," as it did last year, and spoil it all? Not that I am so "particularly fond" of *bows*, but the style and manner that some have of doing the agreeable is pleasing to witness.

January 2, 1858.—When I took up to-day's paper, the first thing I looked for was that new year's *bow*, but I could not find it; on turning over, however, I would have laughed as loud as did Maj. French, (only it would have been unlady-like,) when I found the whole burden laid on the shoulders of his Associate;—but most handsomely he sustained it; and this I would say, not in flattery, but in justice to the enterprise and ability which characterizes those who are associated in the management of the *N. E. Farmer*. I would that they should *feel* that their labors and aims are acknowledged and *appreciated* by their "subscribers, contributors, and friends generally."

When I saw the lines from "Poor Poe," that always touch a vibrating cord away down in my heart, and read the editor's tribute to him, I felt that a *bow* would have been nothing in comparison.

AUNT POLLY.

GRAIN FOR STOCK—COTTON SEED MEAL.

It is much more common now to feed grain of some kind to neat cattle, than it used to be, as it is supposed that cattle thrive better on a portion of grain with their hay, even if the cost of keeping is not increased, than they will, at an equal expense, if fed on hay alone. We have no doubt that such is the fact,—and that if the hay is cut, mixed with the meal, and wet, that it will prove more economical still.

Among the kinds used are Indian corn meal, oat meal, shorts, flax or linseed meal, and quite lately *cotton seed meal*. The latter article is spoken of by many persons who have tried it, as giving highly satisfactory results. We have been using it for ten weeks, as a feed for milch cows, but without entering into any accurate experiments. It is plainly perceived, however, that the flow of milk has been very considerably increased, and that the cows have kept in excellent condition as to flesh.

Prof. JOHNSON, of Yale College, who has given it chemical examination, states that its "composition is not inferior to that of the best Linseed Cake," and that "in some points its agricultural

value surpasses that of any other kind of oil cake of which he has knowledge." He thinks the cotton seed cake much richer in oil and albuminous matters than the linseed cake,—and that *three* pounds of the cotton seed cake are equal to four pounds of the linseed.

Judging of the value of this new feed from our own results, from the opinions expressed by Messrs. JOHNSON and JACKSON, and the high terms in which it is spoken of by several persons who have fattened oxen upon it, we are of the opinion that persons feeding grain to cattle will do well to try the *Cotton Seed Meal.*

It is for sale, at present, by Messrs. *Parker, White & Gannett*, Blackstone Street, Boston, and Nourse & Co., Commercial Street.

For the New England Farmer.

SUGAR MAKING.

MR. EDITOR:—A few days since I saw in the daily *Tribune* a long editorial with the above heading, containing so many things likely to mislead one who is unacquainted with the subject, that I have concluded to send you some of the results of my own experience.

The writer in the *Tribune* says, "get ready, for now is the time," and the only reason he can assign for this, is the old saw, "better late than never." Now the fall, (any time is better than winter,) is the best time to build arches for the boilers, at least where stones are abundant, as in this section of Berkshire. Good fine stones are easily obtained here, and, while they are less expensive than brick, they are equally good in every respect, and far more durable. I will describe first the

ARCHES AND BOILERS

I would use. To evaporate ten barrels of sap per day, I want two pans made each of two sheets of Russia iron. This will make each pan about forty-two inches square and six inches deep, (five and one-half inches deep is just as good.) These are to be set in an arch of the ox-bow fashion, the distance between the side-walls of the arch to be nearly as great as the diameter of one of the pans. A division wall should run from the front of the arch to within nine or ten inches of the rear, and be elevated just high enough for the pans to rest upon it. This should divide the space beneath the pans into two unequal compartments, the place for the fire occupying about two-thirds of it. The remaining third, on the other side of the dividing wall, (which, it will be seen, should be as narrow as is consistent with the necessary strength,) being connected in the rear with the fire-place, will serve as a flue along which the fire will return to the front of the arch. Here the smoke will escape by a chimney built on one of the front corners of the arch, and raised high enough to secure sufficient draft for a strong fire, and to carry off the smoke above the head of the fireman. At the bottom of the arch a grate should be laid (of fire-stone, if they can be easily obtained) with a drain under it a foot deep, and as wide as the fire-place. Into this the coals will fall, and between the grate-stones the air will rush in to feed the fire above. Set your pans eighteen inches above the grate; the return flue will need to be but about fourteen or fifteen inches deep. It is desirable to use dry wood, since the coarser the wood is, provided it will burn fast enough, the less fuel will be required. Of course, a shelter will be needed. Shut the mouth of the arch with a sheet iron door, turning on hinges in a cast iron frame solidly built into the stone work. If you wish to boil fifteen barrels a day, add another pan, of the same size as before mentioned, in the rear of the others, by lengthening your arch, and set all of your pans two or three inches higher for a larger fire-place. Build all your fire, in either case, on the first five feet over the grate. For smaller business, take two pans of a sheet and a half each; these will be, when made, about forty-two by twenty-eight inches. Set them lengthwise, one behind the other, building the fire under the first; and separate the space beneath the second by a division wall in a manner similar to that suggested above, save that the chimney will in this case come on the side in the middle of the structure.

SAP TUBS.

Those made of tin are too expensive, costing about thirty-four cents apiece, and are too small, even if they were cheap enough. I should lose too much sap by running over, if I used such; besides, I want a tub smaller at the top than at the bottom, as they will hang better (more nearly level) on the spike, and catch less snow or rain in case of storms. Those I use are made of wood, hooped with iron, and painted on the outside.

PREPARING TUBS.

A rinsing in cold water is by no means sufficient. You should scald them in boiling water, rolling them round for a moment, and then take out a quart or two and let it stand in them, as the dairy women do, when they scald their milk-pails; afterward scrub them with a little birch brush, and they are ready. If you would keep them sweet as long as possible, turn them down at the last gathering of every run, that all the sap may run out, and nothing be left to ferment. The freezing that occurs before the next "run" will have a good effect upon them. Some of my neighbors have wondered why their sugar is not of first quality—equally good with mine. They could not believe but that all was right, except the sap. Indeed, everything else may have been as it should be, but the sap had been in tubs and in "storage" containing acid enough to spoil the sugar. It would only make molasses, and that of very poor quality. Their tubs may never have been entirely free from sourness since they were first put out years ago. But it requires too much attention to make good sugar, or much of it, for every one who meddles with it to succeed either in quality or quantity.

VESSELS FOR STORAGE.

Some people use cider barrels, and tubs in which apples have been stored, and some of them decayed. A cold water soaking is entirely inadequate to their purification. Boiling water is needed. Fill your barrels partly full with this, bung them up, and when they have stood long enough to become cold, they are fit to be used in

the sugar-orchard. The *Tribune* says, "use the antiquated boilers to store sap and syrup in." To this I demur. They are not usually the purest vessels that can be had.

STORING TUBS.

When you gather your tubs at the close of the season, you will of course cleanse them as thoroughly as you can with cold water, and store them where they will be safe from the action of the weather.

What I have to say of the mode of tapping trees, cleansing syrup, "sugaring off," &c., I must resume for another letter.

Yours, E. H. GOODRICH.

Hinsdale, Mass., March 5, 1858.

EXTRACTS AND REPLIES.

TREES FROM CUTTINGS.

Will slips of elm, locust, or any other trees, besides willow, grow by sticking them into the ground, and, if so, how large should they be. If limbs or branches will live and grow into trees, served in this manner, it appears to me that a good many farmers might find it profitable to plant in this way. The land most suitable in my opinion, is around the edges of swamps and ponds, where there is nothing growing at present. Locust and elm is valuable timber in these parts, when it gets to be five or six inches and more in diameter.

Branford, Ct., March, 1858.

REMARKS.—We have Cherry trees now growing which we obtained by cutting off the shoots which had grown the previous year, and then planting them in moist, shady places. It is quite probable that twigs of other trees would grow as well under favorable circumstances, as we know of one or two instances where the *apple* twig has taken root and produced a fine tree.

—

WHERE DOES THE WHITE CLOVER COME FROM?

Some years ago, in enlarging my house-cellar, I threw out a quantity of blue hard pan. A few loads of this I spread on a moist, cold piece of land, which for several years I had mowed more for looks than profit, it being not far from my house. The next year the white clover came up (to use a common expression) "as thick as a mat," where I never saw clover before. It was very short, but so thick that I cut a handsome swath. Now where was the seed? In what I spread on? Or was it in the gronnd? If so, why did it not germinate before? J. WOOD.

Royalston.

REMARKS.—It is quite probable that the clover seed was in *both* places—in the "hard pan" which you spread, and in the "cold piece of land" upon which you placed it. The gravelly soil spread may have contained some mineral, sulphur, for instance, which was congenial to the seed, and induced it to germinate on the cold, wet land where it had failed to sprout before; or the "hard-pan" may have attracted an unusual amount of heat, and thus caused the clover seed to germinate.

POTASH AND ASHES.

I want to inquire of your numerous subscribers how much good potash dissolved in water and mixed with yellow loam will be a substitute or equal to 100 bushels of unleached ashes for a dressing spread on meadow or for corn in hill? Ashes being scarce and dear.

A NEW SUBSCRIBER.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

TO COOK PARSNIPS.—Scrape the parsnips, wash, and slice them lengthwise; boil in just water enough to cover them, till thoroughly done; then put in a piece of butter, with a little salt and pepper; beat up an egg with a spoonful of flour, and pour over them, and they are ready to dish up.—*Country Gentleman.*

CELERY.—This delicious vegetable is not generally appreciated as a cooking vegetable. Wash the stems clean in salt and water, and drop them into boiling water; after boiling twenty minutes take up and drain; place some toasted bread in the bottom of a dish, lay the celery upon it, and season with butter, pepper and salt.

A CHEAP AND GOOD PUDDING.—Permit me once more to give you a recipe for making a good pudding. It is at once economical, healthful, nutritious, and delicious; it may be eaten warm or cold. When cold, it is a capital substitute for *blanc mange.*

Into a nappy that will contain about two quarts place apples, pared and cut coarsely, until the dish is nearly full; sprinkle on this six tablespoonfuls of sago; then pour into the dish as much hot water as will cover the apples and sago. Let it bake about two hours. If the upper pieces of apples become too brown, push them down and others will take their places.

This pudding should be eaten in deep plates or saucers, with cream or milk and sugar.—*Country Gentleman.*

EGG CAKES.—Eggs are not generally very plentiful at this season of the year, and I frequently make egg cakes as a substitute for fried eggs, and some of my family like them even better than the real eggs. Perhaps some of your readers may wish to give them a trial. Beat six eggs thoroughly, add a quart of sweet milk and a little salt—stir in flour till you have a nice batter, then, taking care to have your lard, or pork fat, hot enough to brown them quickly, drop the batter in with a spoon, serve them hot. Don't make the batter too thick. The above proportions will make enough for a family of a baker's dozen.—*Aroostook Pioneer.*

CURE FOR RHEUMATISM.—1 oz. Oil Rosemary, 1 oz. Oil Cloves, 1 oz. Oil Origanum, 1 oz. Spirits Turpentine, 1 oz. Spirits Ammonia, 1 oz. Tincture Cantharides, 1 oz. Alcohol. Mix in a light glass-stopple bottle, and shake up when used. Heat a saucer on embers, pour a little in the saucer, and rub it on the part affected with the hand, previously warmed by the fire, so as to encourage absorption. Also said to be very good for sick-headache.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, MAY, 1858. NO. 5.

JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

MAY.

"O! knew he but his happiness, of men
The happiest he, who, far from public rage,
Deep in the vale with a choice few retir'd,
Drinks the pure pleasures of the rural life!
Rich in content, in nature's society rich,
In herbs and fruits, whatever greens the Spring,
When Heaven descends in showers or bends the boughs,
When summer reddens and when autumn beams,
Or in the wintry glebe whatever lies
Conceal'd, and fattens with the richest sap,
These are not wanting:—
This is the life which those who fret in guilt,
And guilty cities never knew; the life
Led by primeval ages uncorrupt,
When angels dwelt, and God himself with man."

MAY, more than any other month, awakens and kindles those emotions of the heart which beat in unison with the changes and appearances of Nature. The pleasures of rural life, and especially those of spring, have been a standing theme of admiration, from time immemorial.

Wherever the harmonizing influences of civilization have been felt, there have not been wanting those who delight to sing, paint or chisel the joys of husbandry.

The Idyls of Theocritus and the Bucolics of Virgil are imperishable monuments of the high estimation in which agricultural pursuits were held by the most enlightened nations of antiquity.

Cincinnatus deemed it an honor to exchange the helm of state, to which he had been called by a nation's voice, and which he had so conducted as to secure a nation's approbation, for the plow, and the purer and more simple pleasures of rustic life.

The most successful efforts of genius have been expended upon rustic simplicity.

Among enlightened nations of modern times, no order of poetry has so many admirers as pastoral, no style of painting awakens such enthusiasm, and commands such universal admiration, as landscape.

The merchant, amid the toils and perplexing cares of city trade, sighs for the sweets of country life,—longs to hold communion with nature in her rustic retreats. With the laboring man, the mechanic, and the artisan, the height of ambition of his being is to gain undisputed possession of a "little farm well tilled;" and the professional man and the man of letters are ever looking forward with pleasing anticipations, to the time, when they may be permitted to enjoy a dignified retirement in a sequestered spot, where art is less conspicuous than nature, and where they can contemplate the varying aspects of country life, ramble over sunny hills or meditate by purling brooks, or find unalloyed enjoyments in the cultivation of the soil and the growth and care of the inferior animals dependent upon them.

Indeed, nearly all our ideas of comfort, of calm satisfaction, are associated with country life. The paradise in which Adam and Eve found their chief joys, was a garden, in which grew every conceivable variety of plant. Listen to their charming conversation:—

Adam to Eve—

"To-morrow, ere fresh morning streak the east
With first approach of light, we must be risen,
And at our pleasant labor to reform
Yon flowery arbors, yonder alleys green.
Our walk at noon, with branches overgrown,
That mock our scant manuring, and require
More hands than ours to lop their wanton growth;

Those blossoms, also, and those dropping gums,
That lie bestrown, unsightly and unsmooth,
Ask riddance, if we mean to tread with ease:
Meanwhile, as Nature wills, night bids us rest."

Eve to Adam—

"With thee conversing I forget all time;
All seasons and their change, all please alike.
Sweet is the breath of morn, her rising sweet,
With charm of earliest birds; pleasant the sun,
When first on this delightful land he spreads
His orient beams, on herb, tree, fruit and flower,
Glistering with dew; fragrant the fertile earth
After soft showers; and sweet the coming on
Of grateful evening mild; then silent night,
With this her solemn bird, and this fair moon,
And these the gems of Heaven, her starry train:
But neither breath of morn, when she ascends
With charm of earliest birds; nor rising sun
On this delightful land; nor herb, fruit, flower,
Glistering with dew; nor fragrance after showers;
Nor grateful evening mild; nor silent night,
With this her solemn bird, nor walk by moon,
Or glittering starlight, without thee is sweet."

Such are the scenes which yield a calm satisfaction that is undying—that time, nor distance, nor circumstances, can ever efface; they make an impression that outlives all the gratifications of pomp, or power, or pecuniary gain, and nestle and live in the heart when the applause of the world falls cold and lifeless upon it.

What imagination is so fertile as to conjure up a paradise, where there is neither tree, nor shrub, nor flower,—where neither vegetable color nor odor regale the senses,—where Flora and Pomona are unknown goddesses,—where nought meets the eye, but a boundless waste of sterility.

Sensibility to emotions of beauty and grandeur and sublimity is innate in the human breast. Amid the ever-shifting scenes which nature presents, objects are constantly occurring which awaken these emotions and give a charm to life, to which the shop, the counting-room, the studio, the cloister and the forum are all strangers.

The tiller of the soil is the true nobleman He receives the bounties of Providence direct from the hand of the Giver. He is daily conversant with scenes of unsurpassed beauty and grandeur, and unless more stupid than the ox which he feeds and drives, must be constrained to exclaim, in view of such displays of wisdom and benevolence, "What a stupendous power and boundless love does my Father possess who made and gives them all!"

Who, then, would not be a farmer? Why should not he who is blessed in the possession of a few prolific acres, cultivated with skill, and yielding the staple articles of subsistence, be content therewith? Why should farmers' sons be so ready and anxious, even, to quit the home of their youth and wander from all early associations, to become involved in the intricacies of "trade," and lead a life of uncertain gain, and of feverish disquietude? Why should parents urge this course, as too many do, with the gloomy fact before them, that less than five in one hundred who engage in mercantile life succeed in the business they have chosen?

Man made the city, but God made the country. Great cities are great sores upon the body politic; and were it not for the sanitary influences which flow in from the country, they would become so greatly demoralized as to be exterminated by their own corruption. Our country's hope, like that of every other republic, is in her yeomanry. To the rural districts, to the hard-handed, clear-headed, high moral toned conservative cultivators of the soil, patriotism must look for protection and the perpetuity of our free institutions.

Hail, then, lovely *May*, most inspiring of the months. We have welcomed all the early harbingers of spring that dared to peep from their sunny nooks in *March;* they were few and shy heralds, but were beautiful and breathing fragrance, and imparting joy while winter lingered about them. *April*, too, has passed, watering and refreshing the earth, so that May, with her warm sun and fresh flowers, should be as strong as it is lovely, in order to complete the work she has to do.

"Meadows fresh with Daisies trim,
Shady banks with Harebell blue,
Groves where birds are carolling,
Towering Pines where Turtles coo."

MASSON'S OIL FOR WOUNDS, &c.

I have long been in possession of a recipe for the cure of corked hoofs and wounds on horses

Take 2 ounces of rock salt;
2 ounces of copperas;
2 ounces of white vitriol;
8 ounces of sale molasses;
½ pint of linseed oil;
1 pint of chamber lye.

Pulverize and boil the above together fifteen minutes; then add 4 ounces spirits of turpentine and 1 ounce of oil of vitriol, and bottle it up, and when cold it is fit for use. Shake the bottle before using it. Bathe the wound once or twice a day, and dry it in with a hot shovel.

I have kept and used this liniment, which is here known as "Masson's Oil," for the past ten years, to a good account.—*A. D. Brown, in Country Gentleman.*

SOIL CULTURE.—This is the title of a new work by J. H. WALDEN, A. M., containing a comprehensive view of Agriculture, Horticulture, Pomology, Domestic Animals, Rural Economy and Agricultural Literature. Illustrated by numerous engravings. New York: B. F. Chappell & Co. Persons cultivating the soil will find this a useful book, full of useful suggestions, and given in a brief and comprehensive manner.

For the New England Farmer.

A DAY AT BRIGHTON.

Thursday, or market day at Brighton, is distinctly announced, by the many carriages which are seen rattling along the road; these are usually distinguished by the absence of ladies, and sometimes still more conspicuously by the addition of a lame or blind horse hitched on behind, while a yoke of oxen or a couple of cows, sound or unsound, frequently bring up the rear. As we approach still nearer to Brighton, the number of carriages increase, fast horses rush past us at every turn, while the jolly farmer with his fat and contented horse may be seen plodding slowly and happily along. The rattling of carriages, the lowing of cattle, and the bleating of sheep announce our entrance to the great cattle market of New England.

Having put up our tired horse at the stable near the Brighton Hotel, where a hundred other equally tired horses are hurriedly eating their provender, the first thing that attracts our attention, (if it is in the fall of the year,) is, the great quantity of goods offered for sale in the open air on the piazza of the Brighton Hotel, and in front of the neighboring stores. The voice of the auctioneer is distinctly heard above all the bustle and confusion of the place; and, although very many useful articles are sold here very cheap, yet sometimes the buyer pays pretty dear for his whistle. Good leather trunks have been sold here for the low price of two dollars, but they afterward proved to be made of brown paper; and woolen cloth for twenty-five cents per yard, but it afterwards proved to be made from old rags.

As it is near eleven o'clock, we will next visit the place where any quantity of old, lame, blind or diseased horses may be bought at prices varying from seventy-five cents to five dollars, and where better ones may be bought from that sum, up to any price you wish. Some apparently good horses are sold here very cheap, but sometimes horses are sold here, having various diseases, from glanders down; and having all manner of ugly tricks, from kicking wagons to pieces up. We think there must be some risk in purchasing here, without alluding to the chance of getting a stolen horse.

We will now pass to the cattle-yards, where we see superior beeves, strong working oxen, handsome heifers and steers, beautiful cows, innocent lambs and fat sheep, and a large number of swine, judging from the music they make. With these, also, there is much inferior stock, and sometimes a diseased or an ugly cow, or an ox that has been strained by overdrawing, or bitten by a mad dog, is skilfully sold to an unsuspecting purchaser. After having considered all these things, we conclude to purchase, and, in our haste to do so, we run against a couple of Irish women who are buying a pig; attempting to apologize, we stumble over the pig himself. We pick ourselves up, and see a mulatto sitting on a plank, playing on a banjo and singing about glorious Brighton day.

We next buy a yoke of oxen, very cheap! The fellow who sold them seemed to be in a great hurry, he takes his money and runs. One ox turned out to be very badly strained by overdrawing, and we believe the name of the disease which it caused, is termed red water. We soon ascertain that the cattle had been sold there four times before, and were pretty well known by those who frequent Brighton. We sold them to a person who was well posted up in Brighton affairs for twenty dollars less than we gave, and as one ox was worthless, we think we made a good trade. He sold them the next market day at a fair profit. We then bought another yoke of cattle which proved well, and we returned home apparently satisfied with our day's labor. We conclude this imperfect but truthful sketch with the wish, that the farming readers of the *Farmer* have all made as many good trades in Brighton as the undersigned, and not half as many poor ones. J. N. S.

South Walpole, Mass.

Remarks.—We long since learned that *it is not all gold that glitters*, nor can it be all sham or false at Brighton. Would it not be well for our correspondent to give some of the real merits of Brighton Market?

HOGS VS. DOGS.

"What a dog lives upon will keep a hog." If anybody doubts the truth of the saying, let him kill his useless dog, and put a pig in the pen and give it the dog's allowance. He will find in a few months that he has a fine fat porker fit to be eaten, a use the dog could not be possibly applied to by any Christian man. There are too many dogs in the country, by far too many—if they had all been killed a year ago, there might be two hundred pounds of good fat pork in the country to balance against every dog so set aside, which would be no inconsiderable item in the present scarcity of supplies. Dogs are a nuisance, and should be taxed. While every farmer keeps his dog, and every slave his dog, and every free negro his two or three dogs, sheep stand a poor chance to get through the world and yield their annual fleece with untorn throats. The increase of the dog population accounts for the scarcity of sheep.—*N. C. Planter.*

MANURES.

Mr. T. W. Field, in a paper read before the Farmer's Club of the American Institute, on manures, states the following propositions:

1. Manure does not waste, so long as it is unfermented or undissolved, and these conditions may be effected by drying or saturation.

2. Fresh manure is unfit for food for plants.

3. Fermenting manure, in contact with inert matter, has the power of neutralizing vicious properties, such as the tannic acid of peat, and making it a fertilizer.

4. Manure wastes in two ways—the escape of gas, and the dissolving of its soluble salts.

5. The creative power of manure, mixed with other substances, is capable of multiplying its value many times.

6. The value of manure to crops is in proportion to its divisibility through the soil. The golden rule of farming should be—small quantities of manure thoroughly divided and intermingled with the soil.—*American Farmer.*

For the New England Farmer.

PUMPKINS AMONG CORN.

MR. EDITOR:—For the benefit of your Vermont correspondent, I will give you an item from my experience. Some fifteen years since, I planted three-fourths of an acre of corn in one piece, on one-fourth acre of which I planted pumpkins; the land was manured highly, and gave a fine growth of both corn and pumpkins, but at harvest, the vines had so overrun the corn, that I was obliged to leave that portion until the frost had killed them, by which the fodder was reduced in value at least half, and when the corn was husked, I found the ears shorter, badly filled at the tips, and much lighter than where no pumpkins grew.

This is the only instance in which I have seen a fair trial of both methods on the same piece, having discontinued the practice of planting mixed field crop; but I can see but one advantage in planting corn and pumpkins together, viz., when the bugs destroy the vines, as they often do, the corn is ready to occupy the ground, all the advantage from a variety of crop being obtained quite as readily, by rotation in different seasons; on the other hand, I think the vines produce all the bad effect of weeds, by drawing from the soil the nutriment which ought to go to fill out the grain, and they shade the ground late in the season, thereby preventing the ripening of the corn, quite an important item in our short summers; besides, if the land is prepared as it should be for corn, the vines will pull down and tie it together, so that both crops must of necessity be harvested at once, for all which, in my opinion, nothing like an adequate return will be made in the crop of pumpkins.

As a field crop for feeding purposes, I think the pumpkin will not pay; but if your Vermont friend cannot do without pumpkin pies, I would advise him to plant separate from other crops, or at least near the edge of his corn, where the vines will run out on the grass land, or better still, supply their place with the Hubbard squash; and here let me suggest, if any of your friends have still any of last year's crop of this delicious vegetable, that they should try baking instead of boiling it. It will peel readily from the shell and is much sweeter and drier. WM. F. BASSETT.

Ashfield, Feb., 1858.

HEDGES AND EVERGREENS.

It is doubtful whether hedges will ever become common in New England as division fences, but they will be used by persons of taste as lines of division wherever they will become objects of ornament and utility at the same time. Between well kept grounds about the dwelling, and a dusty highway, or for separating a lawn from plowed fields, or screening unsightly objects from the windows, hedges answer an admirable purpose.

In the western States, however, where wood and stone are both scarce and costly for fencing materials, the hedge, or iron, must be resorted to, if the practice of the older States becomes prevalent, of each man having his farm enclosed by itself. Indeed, on the prairies, hedges would be useful not only as fences, but as affording shade for man and beast, and as a protection against the winds which are usually blowing unobstructed over those vast and treeless plains. Hedges, therefore, will be useful in one form or another, over the whole extent of our country.

Such being the case, we are glad to see a work on the subject of *Hedges and Evergreens*, which will point the way to their successful culture.

The book with the title which stands at the head of this notice purports to be 'A complete manual for the cultivation, pruning and management of all plants suitable for American hedging; especially the Maclura, or Osage Orange;—and fully illustrated with engravings of plants, implements and processes. To which is added a Treatise on Evergreens; their different varieties—their propagation, transplanting, and culture in the United States." By JOHN A. WARDER, M. D., Editor of *Western Horticultural Review*, President of the Cincinnati Horticultural Society, &c. A. O. Moore, Agricultural Book publisher, New York. The work contains a chapter on the *jurisprudence of fences*, giving an outline of the laws relating to fences in the several States, and contains much information of value to those engaged in the subjects of which it treats. It is printed in Mr. Moore's beautiful style, and illustrated with numerous engravings, and for sale by A. WILLIAMS & Co., Booksellers, 100 Washington Street, Boston.

For the New England Farmer.

CONCENTRATED MANURES.

MR. EDITOR:—Much has been said and written within the few past years, on the value of concentrated manures, guano, phosphate, &c., and I cannot doubt that in a multitude of cases the money expended for them has proved a remunerative outlay; and yet I strongly suspect that if these highly recommended fertilizers which have been purchased by the farmers of this State, could be traced to their results, we should find that, like lottery tickets, too many of them have drawn blanks for the *aggregate* profit of the purchaser.

With manures, as with many other things, the fact that they come from a distance and cost a great deal of money, seems to give them, in the estimation of some, an additional recommendation.

Do not infer from the above remarks that I have burnt my own fingers in the purchase and use of these fertilizers. I have tried them to some extent, and carefully noted the result; yet I cannot tell whether I have gained or lost by the operation. But my experiments have helped me in coming to the conclusion that the same expenditure in collecting materials from my own premises to act as absorbents and swell the compost heap, would have proved a more profitable investment. Why, sir, just look at it. Take the article of guano. Two bags at 150 pounds each, would cost me, delivered, at least ten dollars.

These two bags would just about fill a common flour-barrel. Now let any industrious farmer expend five dollars in labor with his own help and team, in procuring swamp-muck, if within reasonable distance; and five dollars more in collecting brakes and other materials from the pasture, road-side or wood-lot; and I think he will have a pile by the side of which the barrel of guano will be small in size and in value; and the ten dollars be kept nearer home.

While ammonia is the principal element of value in concentrated manures, those from the stable and hog-yard, contain in due proportion, more of the requisite food for plants, and besides have more of *bulk*,—an important quality for most of our soils, rendering them more pervious to heat and atmospheric influences.

There are few farmers who so understand how to use these manures, and their adaptation to particular soils, as to make the purchase of them, to any great extent, a safe operation, unless their circumstances are such that they can afford to fail in the experiment.

I believe that many kinds of concentrated manures will yet find a permanent place among the farmers as reliable auxiliaries; but they will be like the *mint* the *anise* and the *cummin*, compared with what he may manufacture on his own premises. J. WOOD.

Royalston, March 6, 1858.

For the New England Farmer

PLEA FOR THE ROBIN.

BY WILSON FLAGG.

Certain cultivators, annoyed by the depredations committed by the common robin upon their cherry trees, have lately discovered, as they suppose, that this bird is of no service to agriculture. They accuse him of living upon fruit and earth-worms alone, alleging that he destroys but very few of the insects which are injurious to vegetation. Herein they are led astray by a very egregious error, and one that might produce incalculable mischief were they to succeed in convincing the public that the robin is an enemy to the garden and the farm. Nothing can be further from the truth. It is in fact one of the most valuable of our birds, exceeded only by the small woodpecker and the chickadee in the service he performs by checking the multiplication of noxious insects. Let us make a few inquiries respecting his habits.

The robin is not a searcher for small insects, that live upon the bark and leaves of trees. He seeks his food like the other thrushes, mostly upon the ground; and is often seen, after a rain, pulling out earth-worms from their holes. This circumstance has led many to suppose that he confines himself to these. It is true that he devours great quantities of earth-worms, but they are only a small part of his diet. He also consumes large numbers of those grubs which occasionally appear on the surface of the soil. These are taken only by certain species of birds. Neither the woodpecker, nor the chickadee, nor the wax-wing, nor any species of swallow, nor the king-bird, nor any of the fly-catchers, nor that excellent friend of the garden, the golden oriole, take their food from the ground. What provision then has nature made to rid the surface of the soil of its noxious insects? Among the small birds the thrushes seem to be designed for this special purpose; and of all the species of this tribe none is more beneficial than the common robin.

What constitutes the food of this bird during eight months of the year when there are no fruits in the garden or pasture? It cannot be said that he lives upon seeds, for he refuses seeds of all kinds unless they are crushed and made into a dough; and if a young robin is fed chiefly on farinaceous food in a state of confinement, he will sicken and die. The plain inference is, that when he cannot obtain fruit he lives upon worms and insects. If angle-worms are the principal part of his diet, how does he continue to obtain them when the superficial soil is dry, and they are lodged in the subsoil? He cannot get them at any time except when they are either wholly or partially above ground. He cannot dig or scratch for them, and must consume other insects or he would starve. And when we consider the vast multitudes of robins in our land, and their voracious appetites, when we consider likewise that they live exclusively upon insects and worms, when fruit is not to be obtained, we must admit that the quantity of crawling vermin consumed by these birds must be immense and altogether beyond calculation. There are no other birds that could supply their place, since the other thrushes are too shy to frequent our tilled grounds. The larks, the snipes and blackbirds are likewise all too shy to perform an equal amount of the same service.

If the robins were to be exterminated the mischievous consequences that would ensue could never be repaired except by restoring them, certainly not within a period of twenty years. Let us enumerate some of the insects that are kept in check by the labors of the robin. He destroys nearly all kinds of worms, grubs and caterpillars that live upon the green sward and the cultivated soil; and large quantities of crickets and grass-hoppers before they have become perfect insects. The grubs of locusts, of harvest-flies and of beetles, which are turned up by the plow or the hoe, and the pupæ of the same when emerging from the soil; apple worms when they leave the fruit and crawl about in quest of a new shelter, and those subterranean caterpillars or cutworms, that come out of the earth to take their food; all these and many others are eagerly devoured by the robin. The cutworms emerge from the soil during the night to seek their food, and the robin, which is one of the earliest birds to go abroad in the morning, is very diligent at the dawn of day in hunting for these vermin before they have gone back into their retreat. The number of these destructive grubs is immense.

"Whole cornfields," says Dr. Harris, "are sometimes laid waste by them. Cabbage-plants, till they are grown to a considerable size, are very apt to be cut off and destroyed by them. Potato vines, beans, beets and various other culinary plants suffer in the same way. The products of our flower-gardens are not spared; asters, balsams, pinks and many other kinds of flowers are often shorn of their leaves and of their central buds, by these concealed spiders."—*Report, page* 343. The services of the robin in destroying these alone would more than pay for all the fruit they devour. Indeed, during the breeding season, a

robin is seldom seen without one of these caterpillars or some similar grub in his mouth, which he designs for his young; and as the robin often raises three broods of young during the season, his species must destroy more of this class of noxious insects than almost all other birds together.

It must be idle to dispute the fact that in certain places the robins are very mischievous in their depredations upon the cherry trees. There is one good remedy for this evil, which was suggested some weeks since by a correspondent of the *Farmer*. This remedy is to plant a greater quantity of cherry trees; for it will be found that wherever there is a great abundance of this fruit the robins do comparatively but little damage. One very important cause of their depredations is the destruction of the blueberry pastures, which would supply them with large quantities of berries about cherry time. It is precisely in those sections of the country, as in Cambridge and the suburbs of Boston, where the blueberry bushes have been extirpated from the wild lands, we hear the most complaint against the robin. Our farmers, when they clear a whortleberry pasture, should transplant all the blueberry bushes to the sides of the walls and fences, to supply the frugiverous birds with berries, and thereby divert them from the gardens. There are thousands of miles of stone wall, within two hours walk from Boston, which ought to be bordered with blueberry bushes and amelanchiers, (June berries,) where without occupying any valuable space they would feed the birds and produce tons of berries, to employ the diligent hands of women and children of poor families, who would gather them for the market. Let those horticulturists who have conceived a prejudice against the robin, instead of petitioning the Legislature to remove the legal protection that new exists in favor of this bird, petition the authorities of the city of Boston to appropriate a few thousand dollars for the planting of blueberry bushes and amelanchiers by the sides of fences in all pasture lands within five miles of the city; and after the work is accomplished we shall hear no more complaints of the robin and the cedar-bird.

For the New England Farmer.

MUD FROM THE MARSHES.

From the *salt marshes* I mean—for every one knows, that the mud from swamps and fresh meadows is more or less valuable as material for compost, according to the position in which it is found, and the time it has been accumulating. When I heard a distinguished gentleman inquire, at a late farmers' meeting in the State House, as to the value of this *marsh mud*, many cords of which he had seen thrown into piles from the ditches cut to drain the marshes, I was disposed to answer his inquiry, and say it was *little worth*. Such was my impression at the time. And such I have since found is the estimate of it by those who own marshes, and have handled this substance. They compare it with the sods gathered from peat meadows—it helps to fill up—but has very little of fertilizing material about it. It is not every substance that is carried to the pig-pen or the barn-yard, that helps to increase the pile of manure, but it is those substances only, that have in them the right kind of material. P.

For the New England Farmer.

CRANBERRIES.

FRIEND BROWN:—I catch up my pen to say a hasty word upon the culture of this berry.

I have seen inquiries frequently made through the *Farmer*, in reference to the best modes of cultivation, &c. My own experience teaches me a few facts.

1. Get rid of all stagnant water by shallow draining.

2. Destroy all vegetation by taking off the turf, or by cultivation.

3. Cover two inches deep with sand, if it is handy; if not, put in the vines, and let them take their chance with grass and weeds.

4. The large round berry is much the best.

5. So arrange your ditches, that a smart shower in summer will flood the vines for a day or so.

6. The vines should be flowed before it is cold enough to freeze the roots in autumn, and be kept flowed till mild weather in the spring.

I flow mine immediately after raking in the fall. By so doing I get all the scattering berries. I keep the water over and among my vines, till frosty nights have mostly disappeared in the spring. The water should be drawn off gradually, so that the vines may not be all exposed to the sun at once. A dressing of sand may be applied by spreading it on the ice in winter—say an inch deep—which will be of great benefit. Eight years ago last fall, I laid out some fifteen dollars in preparing ground, setting vines and fencing a worthless frog pond, containing one acre. Three-fourths of the ground is covered with vines; last fall, I raked twenty bushels of berries, for which I was offered three dollars per bushel, but declined the offer. The price declined also, and I wintered them over.

Please give me a few facts in your next paper, in reference to the milk business of Boston. Please give us the names of the companies running milk-cars into Boston—the names of the agents—what they pay—what they get, and a few of the milk-men's names who buy most largely of them. A particular and full history of the business would be exceedingly interesting, but a few facts just at this time will be thankfully received.

FEEDING HENS, ETC.

I have twenty-five hens. I get on an average twelve eggs a day. They roost in a warm place. I keep oats and ears of corn by them all the time, and pound up raw bones, clam-shells, oyster-shells and old white crockery once a week; give them drink every day, and occasionally give them buckwheat and sunflower seeds. Do they lay as well as they should, or can I feed them differently and make them lay better? GRANITE QUILL.

Weare, N. H.

REMARKS.—We will try to collect the facts about the milk business, and will publish if we obtain them. Your hens are very considerate and liberal. An egg every other day is *quite* liberal. From 140 to 150 eggs in a year from a good hen, and one well fed, is as many as you ought to expect, and is probably rather more than you will get.

For the New England Farmer.

LITTLE THINGS,

Or, a Walk in My Garden....No. 14.

GRAPE VINES.

A neighbor of mine says, that the sweet water grape should be pruned as early as the 1st of November, so that the wood will harden a little before covering them up. Otherwise they will bleed in the spring. I have been much pleased with your correspondent who writes on

THINGS I RAISE IN MY GARDEN.

This is just what we want; not only what we raise, but how we raise it to the best advantage. Professional gardeners have rare advantages in this respect, and can do much to elevate the condition of the multitude by making public their success. May your correspondent long continue to gratify us. But I see a red spot on one of my apple trees, and I am led to notice a little, but very important thing, and that is, a covering for

WOUNDS ON APPLE TREES.

I have tried several things with indifferent success, but have not seen anything so complete and easy as a little red ochre mixed with linseed oil into a paste and applied with a brush somewhat profusely but closely to the wood. It forms a yielding surface, a matter of importance—is impervious to rain, and completely protects the tree from bleeding. It injures my feelings very much to travel by an orchard and see the bark black and killed, by neglecting to cover the wounds. But I wish to say a word on cultivating

THE CRANBERRY.

Very many persons are deterred from cultivating the cranberry because they have been influenced by the complicated and expensive processes supposed to be necessary. I have eaten as handsome cranberries the present winter as I ever saw, which were raised in this manner. A man obtained some vines three years ago, in a neighboring town, took his hoe and proceeded to a wet spot in his grass field, struck in his hoe, put in a vine, trod it down with his foot, and so on, and then said to the grass and vines, do your best each for the mastery. The vines grew, and he has had cranberries to sell. Though this may not be the best method, yet I believe that they may be raised in thousands of places in sufficient quantities for family use without any particular difficulty. I do wish some of your correspondents would inform me through your paper about

MY ASPARAGUS BED.

Shall I, in making a new bed, transplant old roots, or young plants from the seed? I have plenty of each. Yours exceedingly little,

Bethel, Me., Feb. 25, 1858. N. T. T.

Remarks.—If you transplant the old roots you will obtain asparagus much sooner, of course, than you would from the young plants,—and we can see no reason why they would not be just as good.

Gophers.—Some years ago, the State of Iowa was nearly overrun by gophers; but at last it was discovered that the castor bean was an effectual remedy, and its use very much reduced the number of this mischievous pest. The method is, to plant the bean all over the land, about one bean to the square rod. It is supposed that the gopher is fond of the root, and eats it, and that it acts like physic or slow poison. At any rate, it exterminates the gophers. Whether it operates the same with squirrels, or whether any effectual remedy has been discovered for them, we are not informed, but hope if our readers know of any, they will inform us, and thus benefit all.—*Prairie Farmer.*

EXTRACTS AND REPLIES.

WEAKNESS IN LAMBS.

What is the cause and remedy for weakness in the backs and limbs of lambs?

I have twenty-four good northern ewes, three to five years old; eighteen have lambed and the lambs did very well until they were a few weeks old, and then they are taken while fat and smart, with this weakness, and die off suddenly, or remain lingering along. J. B. Ball.

Concord, Vt., March 2, 1858.

Remarks.—These ewes, as appears above, have dropt their lambs early, and while the weather is yet cold. The lambs are weak in the back and limbs. This is a sort of palsy, or partial suspension of nervous influence on the muscles of voluntary motion, and is a disease very liable to occur to young lambs just dropt, if exposed to cold. Ewes heavy with young should always have a warm dry place to retire to, as the lamb, perhaps, suddenly exchanges the temperature of the mother's womb, for one below the freezing point, and lies for hours on a bed of snow, becomes palsied, and perhaps never entirely recovers.

A lamb that has been exposed to cold and become chilled, should be placed in a basket, wrapped in warm woollens, and gradually brought near a fire; then administer a little warm gruel, with some ginger, in small quantity, and gently rub the surface with the warm hand. When the lamb has recovered a little return it to its mother, but in a place where it will not again become chilled.

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BONE DUST ON CORN.

Will bone dust, if applied in the hill, produce any serious effects on corn or potatoes by coming in contact with the seed?

A GOOD FERTILIZER.

I have made a good fertilizer by mixing one part night soil, one of ashes and one of plaster together, two weeks before use. It can be applied on the seed without injury. It will push corn ahead faster than any other compost that I ever used. Emory Stone.

Auburn, Mass., February, 1858.

Remarks.—Bone dust applied to the hill and mixed a little with the soil will not prevent the germination of corn or potatoes—it probably would not if unmixed.

SWAMP MUCK—CROPS.

I have a tract of low brook meadows, a large part of which, back from the stream, is so covered in some places by white moss, and in others by meadow hardhack, that it is of little value in its present condition. Can you so describe the different qualities of muck, that a novice, like myself, can decide its value before it has been tested by experience?

What is the most feasible way of reclaiming such land as I have described? I will state that I have covered a few rods with sandy loam from an adjacent pasture, to the depth of three or four inches. On this I have laid some compost manure, which I intend to spread in the spring and seed it down with herds-grass and red-top. On another small piece I have spread loam at the rate of twenty loads to the acre, and have also dug over a small patch on which I mean to see if potatoes can be made to grow. J. WOODS.

Royalston, Feb., 1858.

REMARKS.—You have made a good beginning in the ditching you describe, and in the application of the sandy loam and compost manure; you will undoubtedly get good crops of grass. Potatoes grow finely on such lands, and so will most vegetables, as we have seen fine crops of cabbage, beets, &c., growing luxuriantly in the warm and porous muck beds. We cannot describe the different qualities of muck so as to be of service to you. If plants spring up and grow well on the ridges you have thrown up, it is evident that the muck is not hurtful. Spread some of it in different places on the uplands and watch its effects. You will undoubtedly find it profitable to haul up any quantity you can get.

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COVERING ROOFS.

As a subscriber in your January number wishes to know the cheapest and best material for covering flat roofs, I send you the following as the best I am acquainted with. It is composed of equal parts, water, cement and coarse beach sand or gravel mixed up with proper ingredients, for which Mr. W. STERLING, of this place, obtained a patent about the year 1852–3. It is impervious to frost, sun, air or rain, and if properly laid on I believe will last a century. I have seen several roofs that have been on six or seven years, and covered a veranda myself last fall, the whole expense being (it is covered with cross wire before the mixture is put on) six cents per foot, including everything, cost of material and laying on, which I believe is forty per cent. less than tin to start with, and five times as durable.

Bridgeport, Ct., March, 1858. J. MOODY.

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SEWING MACHINES—HILLING CORN.

One of your correspondents inquires about sewing machines. Let him look at *Wheeler & Wilson's* before he purchases. Grover & Baker's is a fine machine, but I prefer the shuttle stitch; most of the cheap machines are, I think, very imperfect and liable to get out of order. Most of them use but one thread, which is liable to rip. There is now a great variety of machines, and no one is excusable for letting his wife sew by hand if he is able to buy a machine.

HILLING CORN.

One writer advocates hilling corn three times. Is he aware that while his corn is throwing out roots higher upon the stalk every time he hoes, that the lower roots are dying, and that his corn is turning from a seedling plant to a layer? And that a field "hilled" very high will be blown to the grouud with a wind which a field cultivated level will stand with impunity? This is true in this section, and I guess elsewhere.

Cultivation, and frequent cultivation, is right; but no good farmer here, now, advocates the hilling process. D.

Middlesex Co., Ct., March 2, 1858.

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PAPERS ON THE POTATO ROT.

Has any advance, of late, been made in the discovery of the cause or causes, of what is generally termed the potato rot? Several years since, the community was deluged with theories upon this matter. The rot still continues, but the theories have *funked out*—to use a strong, but coarse expression.

My attention has recently been called to this matter, by inquiries for a certain letter written by the late Dr. T. W. Harris, of Cambridge, in which he clearly proved that certain insects of the beetle order, found upon the vines of the potato, were not the cause of the decay of the tubers or roots. And particularly, that the little black fly, or beetle, put forward by Mr. Whipple, of Lowell, as the cause, was entirely harmless of this offence. I have looked for these letters of Dr. Harris, (who was authority second to none other on whatever he presumed to speak,) but have not been able to put my hands upon them. If you can point to them you will confer a favor upon all who are interested in this subject—as every lover of good potatoes should be.

Very truly yours,

March, 1858. J. W. PROCTOR.

REMARKS.—We can give no clue to the papers wanted.

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CURE FOR CHILBLAINS.

Draw off the stockings and sit with the feet to the fire as hot as it can be borne, until the feet feel easy. Repeat this every night, and cure will be certain. I have tried many things beside this without any good effect.

HILLY FARMS.

Is a farm located on a side-hill as desirable as one upon level ground? Is the manure likely to be lost on such lands, or is there any particular manure best adapted to it? A READER.

South Wrentham, Mass.

REMARKS.—Land of the same quality is certainly preferable on a level, or gently rolling surface, as it is more easily cultivated and is less likely to wash. Where a field on a side-hill is highly manured, you will usually find the land at the base quite productive, yielding large crops of grass or other crops that may be upon it. We are not aware that any special manure is better adapted to side-hill than to other lands

JOHNSON'S PATENT HOG TROUGH.

The ease and economy with which farm work may be done, like all other business, depends much upon the arrangements and conveniences that may exist for doing it. It is not only important to have buildings and implements well made, but they should be *convenient* for the uses for which they are intended. Even a pig's trough may have the requisites of convenience and economy, or it may not. Many a man is obliged to jump over into the quagmire of his sty and turn the trough "right side up," beating off the squealing and hungry swine with a cudgel or the toe of his boot, before he can empty his pail! Now if this is a luxury, it can only be enjoyed by a *rich* man, as no man of moderate means can afford it; it would be a loss of time, and probably of feed, that would impoverish him too fast.

We have introduced Mr. Johnson's new Pig Trough, above, that the reader may see for himself, whether its introduction will be any improvement in his mode of feeding swine. Without a trial of it, we cannot speak with certainty, but it seems to us that it is simple, cheap, and will prove effectual.

It is simply an elongated bowl, with a cover half as large and of the same shape, which may be opened or shut at pleasure. It is placed in the side of the sty, by cutting out a hole in the boards, and fastened with three bolts, and then the pig cannot get his feet into it, nor get the food out. It is made of cast iron, so that the swine will not eat it, *unless very hungry!*

In the figure above, the man has opened one bowl and the pig is taking his breakfast, while the other bowl is being filled the lazy pig seems inclined to lounge till the last moment.

AGRICULTURE IN MICHIGAN.

Our sister State, Michigan, has bounded by a single leap, as it were, not only into line with the elder States, but has already outstript them in some of the elements which must certainly be among the principal causes of intellectual wealth, prosperity and power. With a wisdom unexampled in this country, her people have taken hold of the great interest of agriculture with more energy and system than can be found in the legislative action of any other State in the Union.

We have now before us, through the attention of Mr. JOHN C. HOLMES, the accomplished Secretary of the State Society, the *eighth* volume of its agricultural transactions, containing nearly a thousand pages of printed matter. In the midst of this mass there are many papers of value, showing a large amount of observation, research and experiment, and an intimate, practical knowl-

edge of the business of the farm, as well as its theories, and its aspects in a theoretical and scientific point of view.

A paper on *The Potato*, another on *The Breeding and Management of Sheep*, on *Fruit Trees*, on *The Cultivation of Clover*, on *Thorough Draining*, and one by JOSEPH R. WILLIAMS, read at the Dedication of the Agricultural College. The paper that follows is the annual Address before the Calhoun County Agricultural Society, by Prof. J. E. TENNEY; it abounds with pleasant references and useful suggestions. Among other things, it gives the following striking comparison:

"Michigan has 56,243 square miles—Arkansas 52,198. Michigan has a population of 397,754; Arkansas 209,897; 47,100 of them are slaves. Michigan has property valuation, $59,787,295; Arkansas, $39,841,025. Michigan, value of farms, $51,874,446; Arkansas, $15,256,245. Michigan, improved land, $11,922,110; Arkansas, $6,647,969, value of slaves included. Michigan has an educational income of $214,717; Arkansas, $105,819. Michigan has 56 newspapers; Arkansas, 9. This last comparison is wonderful. But 9 newspapers in Arkansas! The literature of any country is a pretty safe index of its prosperity. No one can doubt but that the rich soil of Arkansas has a capacity equal to that of our own State, for farming interests, and it is equally certain, that Slavery paralyzes every species of improvement."

Then follows the address from Genesee County, by C. P. AVERY, also a capital paper. But why did they print it twice? If delivered before two societies, one insertion in the Transactions would seem to be enough. The address before the Jackson county society, by Rev. ELIJAH H. PILCHER, the Munroe County, by A. R. STRONG, and that of WM. M. FENTON, of the Shiawassee County, are also practical and excellent productions. There are also, reports upon farms, draining, &c., which cannot fail to arouse the attention of farmers, if these papers find their way into the newspapers of the State.

This energetic State has the honor, we believe, of establishing an Agricultural College, with all its professors and necessary officers; has a tract of nearly 700 acres of land, and suitable buildings already erected upon it. That she may make steady and healthful advancement in this noble enterprise is our sincere wish.

SALT.—An improvement in the manufacture of rock and sea salt has been patented in England, which consists in fusing the raw salt, and keeping it for some time in a state of tranquil fusion, decanting it into hot molds, or letting it cool slowly; in this manner, all the impurities are separated from the mass in fusion, and are eliminated by crystallization by the dry process, which corresponds with crystallization by the wet one.

FARMING IN MAINE.—The town of Exeter, in Penobscot county, Maine, is almost exclusively a farming town, and a recent examination and estimate of its value by competent gentlemen, has led them to the declaration that it is worth now twenty times as much as it was twenty years since. It will hardly do to say that farming in Maine is not a good business.

SEVENTH LEGISLATIVE AGRICULTURAL MEETING.

[REPORTED FOR THE FARMER BY SENAS T. HAINER.]

At the seventh Legislative Agricultural meeting, held at the State House last Tuesday evening, Hon. Mr. FELTON, of Worcester county, presided. *"Drainage"* was the subject of discussion.

Mr. RICHARDSON, of Franklin county, deemed the subject one of great importance, and one on which farmers needed information. The wet and unproductive spots so prevalent in the western part of the State should be made available for agricultural purposes. They had heard of brush drains, but he could not recommend them in his section. Their land was plentifully supplied with small stones, and it having occurred to him that they might be used to advantage in the place of brush wood, he made from 75 to 100 rods of drain with them. He dug the drain wider than would be necessary in the use of tiles, and from 2 to 2½ feet deep, they being twenty inches wide at the top and from 12 to 14 inches at the bottom. He placed small stones on the bottom from 12 to 14 inches apart, and then placed a cover of larger stones over them. Then he filled in with smaller stones, leaving the smallest on the top. Bushes, sods or coarse hay was then placed on top. This was made in April and May of last year. It was a very wet season, and in a very few days water commenced running from the drains, and had continued to when not prevented by the frost. The soil was black and springy. The immediate benefit of this was, that the soil became in condition for cultivation in good season, and did not bake or become hard. It also took the stones out of the way and out of sight. Time must determine as to the durability of this drain, whether or not it would fill up. It cost about 50 cents a rod.

Mr. FAY, of Boston, said they got their first principles of drainage from the other side of the water, where it is necessary that almost all lands be drained. In our climate, it seemed to the speaker, that drainage was only necessary in springy and hard, clayey soils. The best soil in the world was that which would hold the ammonia best. Sometimes water ran off too fast and left the land to suffer from drought. Drainage would hardly pay in this country except on springy soils, and those with a clay subsoil. How should we drain them? The tile drain was doubtless the best, but too expensive for common use. Open drains, which should not be over 30 feet apart, were unsightly and very inconvenient. Drains should without doubt be covered, and those mentioned by Mr. Richardson were doubtless next best after tiles, and would last 20 years. He had made similar drains 10 years ago. They were now discharging water with regularity. It might

be supposed that water would hardly find its way through these stones, but water would make way through very small crevices if there was but a slight fall.

Mr. FLINT, Secretary of the Board of Agriculture, did not believe in indiscriminate draining in this country, for the reason which had been stated. But he rose to introduce a gentleman of experience in this matter, who had constructed four miles of drain. He referred to Mr. B. F. NOURSE, of Boston.

Mr. NOURSE said that he had laid two miles of tile drain, in which he made use of 10,000 tiles, and about the same distance of stone drain, on his farm in Orrington, Maine. His stone drains were four feet deep. They were constructed of side stones covered with flat stones to form a channel for the water. He then filled with small stones about six inches deep, then threw on sod, turf or bushes, to exclude the particles of soil, and then returned the soil. This cost from 90 cents to $1,00 a rod. His small drains were 3½ feet deep, similar to the above, and cost from 75 cents to 87 cents per rod, deducting the amount of the benefit in getting rid of the stones. His small tile drains were less in width, but of the same depth, and equal care was used in laying them. When labor was dear they cost from 80 to 88 cents per rod. His soil was springy and cold, with a hard pan. The drains were laid four rods apart, and afterwards the land was plowed crosswise over them. The effect was to put these lands in good working condition earlier in the season than any other land in the neighborhood. In 1852, a lot of springy land which he had drained with tiles was in good plowing condition as soon as the frost was out. Before the drainage, cattle could not cross it in early June without miring. The effect of drainage on the field crops, including roots and grain, was equally marked, giving an increased return of more than double the extra cost, and it more than doubled the grass crop. The last foot in the depth of a drain was the most expensive and the most valuable, but $37,50 per acre would cover all the expense of drainage. This was a process which increased in value with years. It enabled the *later* as well as *earlier* cultivation of the land. His own land in Maine, drained in this manner, had been plowed as late as November 20th. He found that the cost of the tile drain was a little larger than the stone drain. He made no account of the advantage of getting rid of the small stones. He found no difference in the operation of the two drains on his own farm, which was a pretty steep hill-side, with a northern exposure. He could not recommend an open drain with stones.

Mr. HOWARD, of the *Cultivator*, said that arrangements were making to furnish tile at a cheaper rate than heretofore. Drains were made in New York at a cost of 30 cents a rod. They would be for sale at all the agricultural warehouses here. Their average depth was 2½ feet. There might be cases where a depth of 4 feet, or more, might be necessary. It was found in England that in very tenacious soils, depth would not compensate for great width of space between the drains. The effect of water left on the surface was to bake and stiffen the soil. On springy soils, where sub-aquatic plants were observable, drainage was necessary.

Mr. COOK, of Wareham, had found drains of great advantage even ten rods apart. He had doubled the value of lands by open drains this distance apart. If his drains were nearer together he had found the grass lighter. They drained the land too much. Tipping in stones without the care of laying them had not worked so well as bushes.

Mr. FLINT offered the following resolutions referring to the death of Col. MOSES NEWELL, of Newbury, which were adopted by the meeting, after feeling and eloquent tributes to the memory of the deceased by Mr. FLINT, Mr. FAY, of Boston, and Mr. DAVIS, of Plymouth.

Resolved, That we contemplate with deep and unmingled sorrow the death of our late associate, the Hon. MOSES NEWELL, of West Newbury.

Resolved, That we feel most sensibly the great obligations which rest upon the community to cherish his memory, for the lively interest which he manifested in the progress of agriculture, and for that benevolence, courtesy and kindness of heart which gained him the confidence and respect of all.

Resolved, That we sympathize most deeply with the family and friends of the deceased in their heavy bereavement, and that while we mingle our tears with theirs, we rejoice in the belief that he has passed to a higher and more glorious state of existence and happiness.

Resolved, That a copy of these resolutions be transmitted to the family of the deceased, and published in the report of this meeting.

NEW GRAFTING WAX.

We find in the papers the following recipe for making *grafting wax*. It is similar to a composition which has long been used for covering limbs where they are cut off in pruning. It may prove well, and will cost but little to try it. It is as follows:

Take two ounces of common rosin, melt it slow over a fire, being careful not to heat it so much as to make it throw off its spirit of turpentine. When it becomes clear as syrup, add a little less than one ounce of alcohol, and mix well and put in a bottle at once and cork tight. Alcohol is to be added sufficient to make the mixture liquid and keep it so, and when applied to trees, it hardens at once and forms an air-tight covering.

For the New England Farmer.

SUGAR MAKING.

TAPPING THE TREES.

The old-fashioned barbarous method of *boxing* is now mostly disused; and the custom of using an inch auger, or even one of three-fourths of an inch, should also be discontinued. The practice, too, of fastening a spout under the auger-hole by means of a gouge, is by no means to be recommended. A bit, of three-eighths of an inch diameter, is large enough. I use no other, though my trees are from one foot to two and a half feet through. As for "spiles," the best when made, and the easiest to make, are made from white pine. Take free sticks eight inches long, and split them up into pieces five-eighths of an inch square. Saw them half in two on opposite sides, about two and a half inches from each end. You can split them with a knife or chisel as easily as you could open an oyster. Every stick will thus furnish you two spiles in the rough, five and one-half inches long. Bore holes through the square ends with a bit, and if the timber is soft, a pod-bit will remove the wood so that there will be no need of burning. Whittle them, not to a point, but so that they will exactly fit your three-eighths bore. Spiles should not be driven hard into a tree, for if they are dry, they will be likely to swell and press the bark on each side so as to kill it, causing a wound that will require a long time to heal. It is very easy to set them perfectly tight with the hand.

You can box the tree anywhere from one to six feet from the ground, selecting a place where the timber is free and straight-grained. The sunny side of the tree is to be preferred early in the season; later, the shady side is best. If there is much snow, spike up your tubs; if not, I would set many of them on the ground, if the roots were not in the way; this is much better in a windy place, than to hang them up. Spiles can be made of various lengths, up to two and three feet long, to suit the different locations. Bore about an inch deep at first, and about one-fourth of an inch more each subsequent time; as you will generally need to tap over twice during the season; but never exceed an inch and a half in the wood. Large trees may sometimes be tapped over by transferring the tub from the south side to the north, when the south side ceases to run.

SPIKES.

Wrought nails are not fit to hang up tubs with. I use spikes made expressly for the purpose, two and one-half or three inches long, and one-fourth of an inch square, with a heavy brad head, and flat point so that they may cut their way into the tree without splitting the bark, and also be more easily drawn. Good spikes for the purpose are worth $1,25 per hundred.

CARE OF SAP.

Be especially careful to keep your sap clean both in the storage and the boilers, and thus save the eggs and milk which the *Tribune* recommends to be used. Leaves and other foreign substances will discolor your sugar very badly. The best way is to prevent all need of cleansing. To dip sap from one pan to another, as is advised by the *Tribune*, would be worse than labor lost. To dip a single barrel would be no great matter, but to dip twenty-five barrels per day, or four hundred barrels in the season, (the quantity I boiled last year,) would be an additional labor I should not be willing to incur. Besides, even if it cost nothing, I should choose not to have it done.

THE SYRUP

need not be taken out oftener than once a day; and should not be thicker than will make six pounds to the gallon, since it will not settle clear, if but a little too thick. When it is reduced to the right point, (a thing best learned by experience,) take the pans off and turn it out; for, if you undertake to draw it off at one corner by an outlet made for the purpose, you will be likely to burn some, as your arch will probably be hot. Two persons can easily remove the pans, if made, as they should be, with two handles on each side. But it will be said that this plan will not work, if there is but one person tending the boilers. I will tell you how I can take off the biggest pan I have described, without help. Near the middle of your arch, upon one side, and at a convenient distance from it, set a post of proper height for the purpose. Fasten a light pole, that you can handle easily, to the top of the post by a pin driven in vertically. To that part of the pole which comes just over the centre of the pan, attach a cord that has been doubled, or two cords, if you choose, each being tied in the middle. You will then have as many cords hanging from the pole as handles to each pan. To each of them fasten a hook made of strong wire, hook them into the handles, and then, if the height of your post and the length of your cords are rightly adjusted, by lifting at the free end of your pole, you can raise your pan, swing it round, and set it on a platform that you can readily construct. This is easily done, and will obviate the necessity of having two hands in the sugar-place when you "syrup down."

Strain the syrup through a tolerably fine strainer into tubs (of a large size, if you prefer,) but *not* into iron kettles, and let it have time to settle perfectly before "sugaring off."

About this and a few other things I will say a few words in the next paper. E. H. G.

Hinsdale, March, 1858.

For the New England Farmer.

FARMS IN RUTLAND CO., VERMONT.

"L. S.," of Castleton, Vt., recently said in your columns, "that not one farm in fifty in Rutland county has or can be made to pay four per cent. upon the assessed value thereof." I think he is mistaken. We certainly send large quantities of produce away after reserving enough for all our wants. I understand that the Brighton and Cambridge Markets receive their largest supplies of cattle and sheep from Vermont, and I have no doubt that Rutland county supplies her full share of them.

It is my opinion that Vermont has plenty good land that may be cultivated at a better profit in small farms than can be obtained by farming in the West. Large farms are well enough where there is large capital and large skill. The great trouble with us is, that our boys and girls are not educated for farming business; most of them are looking to something else for a living, partly be-

cause they have heard the cry so often that "there can be nothing made in farming." New England is the place for honest enterprise, and for farming especially,—but then men and women ought to understand the business as well as the cabinet-maker or wheelwright does his. J. E. W.

South Londonderry, Vt., 1858.

BE GENTLE WITH THY WIFE.

Be gentle: for you little know
How many trials rise;
Although to thee they may be small,
To her of giant size.

Be gentle! though perchance that lip
May speak a murmuring tone,
The heart may beat with kindness yet,
And joy to be thine own.

Be gentle! weary hours of pain
'Tis woman's lot to bear;
Then yield her what support thou can,
And all her sorrows share.

Be gentle! for the noblest hearts
At times may have some grief,
And even in a pettish word,
May seek to find relief.

Be gentle! for unkindness now
May rouse an angry storm,
That all the after years of life
In vain may strive to calm.

Be gentle! none are perfect—
Thou'rt dearer far than life;
Then, husband, bear and still forbear—
Be gentle to thy wife. FANNY FERN.

For the New England Farmer.

BLOOD MANURE—AN EXPERIMENT.

MR. EDITOR:—I wish to inquire, through you, if Nourse, Mason & Co. still continue to manufacture the blood manure, of which I bought last season? If so, I propose to give the results of what I used by way of trial, both for their benefit and for the advantage of the farming community, through the columns of the *Farmer*. Thinking as I do that the farmer cannot manure too highly, and that some concentrated manure may be used to much advantage in forcing forward the young crops, I have always used, to considerable extent, stimulating manures at the time of planting.

I began to use guano among the first, having taken two bags of Ruggles, Nourse & Mason, I think of their first importation, and have used it to a greater or less extent ever since, mostly with profit to myself.

But as it became more known and in greater demand, the sellers of the article, deeming it a necessity to the farmer, continued to raise the price, until they carried it too high for their own advantage. I then began to try other fertilizers. Super-phosphate, ashes, muriate of lime, (a poor manure, according to my opinion, by the way,) fish guano, &c., still continuing, however, to use Peruvian guano side by side with the other manures mentioned, and comparing the cost and the result.

Last year, on seeing the advertisement of the *concentrated blood manure*, I resolved to try *that*, side by side with guano and super-phosphate, on a small scale, and therefore purchased two bags, weighing, I believe, 300 lbs. The cost, I think, was $35 or $40 per ton, while guano was selling for $68 or $70; the blood manure being but little over one-half as much per lb. as the latter.

I applied it in the hill to corn, as nearly as I could in equal proportions of *weight*, thus making it *cost* me about twice as much where I manured with guano as with the blood manure. I put up stakes at the end of the rows, marked for each kind of fertilizer on the land, and watched the effects through the season. I used on the piece guano, super-phosphate, muriate of lime and blood manure, ten rows of each, leaving ten rows unmanured. I said I watched the growth through the season with much interest, and could perceive but little difference between the looks of the corn manured with blood manure and super-phosphate, both being of a darker green and more luxuriant growth by far than where the muriate was used, which did not appear to have made any better growth than where the corn was not manured in the hill at all. The guanoed rows were *nearly*, but not quite up to the rows on which the blood manure was used, but at double the cost; and we must also take into consideration that not one year in five is as good as the last to obtain all the virtues of guano. In a dry season I have found it worse than money thrown away to apply it. Therefore I shall use the blood manure in future as a stimulant, with perhaps some exceptions in favor of super-phosphate.

There is one objection to the super-phosphate, that you are not sure of getting a good article, and being manufactured at a distance—I have always used De Burg's—it is not (should what you bought prove inferior,) so handy to *blow* the manufacturer up as it would be to complain of a firm nearer home.

For their sake, and for the benefit of the farming community, I hope Nourse, Mason & Co. will continue to make and sell the blood manure, and from their well known standing as fair business men, I think we may rely upon the article as being what it professes to be.

I intended to harvest the rows and husk them separately, when I could have given a more definite result; but fortunately for me, although unfortunately for my making on accurate trial, I had so much fruit last fall, and was so much hurried thereby, that I did not do so.

Westford, March 1. L. H. HILDRETH.

CURE FOR THE BITE OF A MAD DOG.—A writer in the *National Intelligencer* says that spirits of hartshorn is a certain remedy for the bite of a mad dog. The wound, he adds, should be constantly bathed with it, and three or four doses, diluted, taken inwardly during the day. The hartshorn decomposes, chemically, the virus insinuated into the wound, and immediately alters and destroys its delecteriousness. The writer, who resided in Brazil for some time, first tried it for the bite of a scorpion, and found that it removed pain and inflammation almost instantly. Subsequently he tried it for the bite of a rattlesnake, with similar success. At the suggestion of the writer, an old friend and physician tried it in cases of hydrophobia, and always with success.—*Germantown Telegraph.*

For the New England Farmer.

CULTURE OF THE MANGOLD WURTZEL.

BY HENRY F. FRENCH.

Value of the Mangold—Fed to Cows in the City of London—Culture in Lincolnshire, England—Culture in Ireland—Letter from Mr. Boyle, Farmer at the Albert Model Farm.

In no single point did my opinions meet with a more decided change, in my wanderings last summer in Europe, than with respect to the value of the mangold wurtzel. My belief now is, that we can cultivate no other root for stock so profitably as this, and I hope the readers of the *Farmer* will give it a fair trial the coming season.

The results of careful inquiry in many places in England and Ireland, and of observations in Belgium and France, where the climate is hot and dry in summer, may be given in a few lines. The mangold is more easily cultivated and yields a greater weight than any other. It is in general of about the value, bushel for bushel, with Swede turnips, for all horned cattle. It is valuable for sheep, for horses and for swine. Many English farmers consider the mangold equal in value to carrots, bushel for bushel, for cows. Swine, they say, will thrive well on them raw in the spring and summer, and there is nothing so profitable to raise for milch cows. All agree that they should not be fed out until after Christmas. Many say they are actually poisonous to cattle in the fall. They doubtless undergo some ripening process, like winter apples, after they are taken from the ground, or some fermentation, which adapts them to the wants of animals.—Twenty-five or thirty tons of 2240 lbs. is a common crop to the acre in England. I think three or four tons of them can be raised with the same labor as one ton of carrots. There is nothing that will stand a drought like the mangold. They have been known frequently to strike to the bottom of a four feet drain, and so have a good chance to find all the water that is going. The beet, of which the mangold is a huge variety, thrives well in France, as is well known, and is extensively cultivated for sugar. I observed through both France and Belgium that the beet endured drought better than Indian corn. In our hot, dry summers, it must be our surest root crop. I had always supposed it easily produced, but not to be of much value. My attention was first called to it in London, a strange place to study the culture of root crops.

In the midst of the fashion at the West End in London, a sensitive and discriminating nose may detect the rural flavor of the cow-house. I soon found a stable near my boarding-house of three hundred and fifty cows. Visiting them often, I took careful notes of the mode of keeping, the structure of the stables, quantity of milk and breed of animals, which I will advert to when there is room in the paper. All I wish to say now, is, that I never saw a better collection of cows, and that then, in the month of June, each cow received three pecks daily of mangolds. My inference is that if it is profitable to feed this root to cows, in the city of London, in the summer, it must be profitable for farmers in the country to use it.

Everywhere I heard the same opinion, and made it a subject of conversation often, that I might not mistake the opinion of a few for public sentiment. In July, I passed a week with Ralph Lowe, Esq., of Brauncewell Manor, in Lincolnshire, and found that he and all the other good farmers of one of the best farmed districts in England thought very highly of the mangold. So after dinner one day, I took my pen and notebook, and asked him to give me careful directions how to cultivate the crop in his country. Mr. Lowe is as reliable as any man in England, and his mode is correct for his district, and a little Yankee shrewdness may adapt it to America. I give the directions almost verbatim, as I recorded them that pleasant summer evening, in "Merrie England."

"Take dry land, well drained,—not clay,—that will work fine, say after wheat. Manure with twelve tons of good manure to the acre, at least, and the more the better. Plow it in six inches, and leave it till spring; then when dry enough, harrow deep, roll and work fine with plow and harrow. Sow broadcast at least 560 lbs. of salt, twice the quantity is better. Throw into ridges twenty-seven inches apart with a common plow. Soak the seed eighteen hours in water, and lay on a dry cloth twenty-four hours. Drill with a hand-drill three to six pounds of seed to the acre. Examine and see if the seed is sound or has been eaten by an insect. Drill 100 lbs. of superphosphate with ashes, the more the better, with the seed on the ridge, the ridge having been first rolled lightly to flatten it. Sow one inch deep, by hand, drop the seed six inches apart. Hoe as soon as up—thin out to one foot apart. Horse hoe and keep clean. Look over and be sure to have but one plant in a place.

In October or November gather without breaking the skin, cut or twist off the top an inch above the root, remove the earth with a dull instrument, so as not to cut the root. They are usually stacked and covered with straw and earth in England, but will probably (says Mr. Lowe,) keep like potatoes anywhere. Average crop, 26 to 30 tons of 2240 lbs. to the acre. Spread the leaves evenly over the ground, and plow in. By no means remove them from the land. Do not feed out till February, because the mangold is poisonous early in the season, and will scour the cattle and do them no good."

So much for Lincolnshire. Nearly two months after this my wanderings led me to Dublin, in Ireland, and to the Government Model Farm at Glasneven, close by. I shall some day, perhaps, have a long story to tell of this school and farm, but now mangold is the word. I never saw better crops in my life than on the model farm, and the mangold I found in high favor there too. Dr. Kirkpatrick, the Superintendent, was absent, but Mr. Boyle, the farmer, a man of great intelligence, showed me the farm. I was so much struck with the mangolds, and had become so much impressed with the importance of the crop to us at home, that I requested Mr. Boyle to furnish me with an account of its cultivation for publication in America.

Mindful of his partial promise, Mr. Boyle has written me the following letter, which I know will interest our readers. The article referred to in it has not yet been received, but will be in some form given to the public when it comes.

We have here an opportunity to compare the views of persons quite remote from each other, and it is worthy of notice how well they are agreed, especially as to the points that the mangold is very valuable, and that it must not be fed early in the season.

ALBERT MODEL FARM,
Glasnevin, Dublin, 12th Feb., 1858.

SIR:—At your visit to this farm last autumn I promised to forward you a report on the cultivation, &c., of the mangold wurtzel; and on speaking to Dr. Kirpatrick (the Superintendent) on the subject, he thought better to allow the advanced pupils here to compete for prizes, offered by himself, for the best essay on that crop, with the understanding that it should be forwarded to you. This I agreed to, and I therefore, for the present, forego the pleasure I should have derived from sending you a paper of my own on the subject. The essay is at press, and it shall be forwarded to your address immediately after issue.

I hope it will reach you in time for the purpose originally intended. A portion of the essay has just appeared in the *Chemico-Agricultural Society's Journal*, which you may expect along with the essay in a complete form. Every succeeding year we are more convinced of the superiority of mangold over Swedes for general purposes. The only reason, perhaps, why this crop should not altogether take the place of Swedes, on *deep, rich land*, is that it is not fit for use until it has been stored for about two months. Hence turnips, or some other crop, must be supplied for this period. The crop of mangold which you saw growing here in August, produced 31 tons, per statute acre, of *bulbs*, and 12 tons of leaves. Swedes 19 tons per acre; wheat 20 to 25 cwt.; oats 30 cwt.; potatoes 8 tons. Our potatoes are keeping well in store, and the crop pays us better than any other we grow.

Returning to the mangold; it requires to be largely manured, the land on which it is to be grown *deeply* tilled. On no account should the young plant be *bled* by any of the implements in the after culture. Should be securely stored previous to the setting in of *frost*; the *long* varieties are more susceptible of injury than the *globe* varieties—the former should be first used. If stored in *cellars*, it must be well ventilated, otherwise the heap will *heat* and decay. Even over ground, in large piles, the crop will require ventilation. It occurs to me that it will take great care and good management to keep the mangold secure from the frost of an American winter, and at the same time to provide proper ventilation.

In taking off the leaves at the time of storing, care should be taken that the *crown* of the plant is not cut into. Some persons advocate the *breaking* off the leaves by the hand. I prefer cutting them off carefully. The bulbs will keep all the better in store by allowing some *of the earth* to remain on them when taking them out of the land. As to feeding qualities, the mangold will produce more *milk* than the same weight of Swedes, and the milk from both will produce as nearly as possible the same per centage of cream; but the butter produced from the former will be paler in color than from the latter. Swedes, however, give an unpleasant taste to milk, which may be obviated by the use of a little nitre in the milk when fresh.

Some of these points may not be touched upon in the essay, hence I have taken the liberty of saying a little on the subject here. I shall be happy at any time to give you my views on any farming subject you may select.

I have to thank you for the Patent Office Report, the value of which is enhanced by your own article. I have a great many near relatives in the United States, most of whom are engaged in farming pursuits—some in Ohio and others in Wisconsin, &c.—and I have an opportunity of knowing a good deal about the country, and I am always glad to see the official reports.

I have the honor to be, sir, your obt. servt.,
WILLIAM BOYLE.

If we consider the above statement, as to all the crops named, we shall find them very heavy. The ton should be reckoned 2240 lbs., and the cwt. 112 lbs. The wheat crop, then, was 40 to 50 bushels to the acre, reckoning 56 lbs. to the bushel; the oats 112 bushels to the acre, reckoning 30 lbs. to the bushel. The potatoes 320 bushels of 56 lbs.

When shall we have Model Farms in our country?

For the New England Farmer.

MOSES NEWELL, OF WEST NEWBURY. Æ. 63.

On Saturday, 13th inst., at noon, it was my privilege to be present in West Newbury, when the mortal remains of this highly esteemed citizen of the county of Essex, Mass., were deposited in the silent tomb. I have rarely known a better man. An intimate acquaintance of more than forty years has confirmed the belief that he was worthy of entire confidence. Inheriting, as he did, a vigorous body and an ample farm, from his much respected sire, he was content to remain a genuine specimen of the New England farmer, without deviating into the quagmires of official life. True, at the earnest solicitations of frien-

and for their gratification, he several times accepted office, for short periods, but never for the vain desire of official distinction, or to the neglect of his family or farm. Frank, open and free, you always knew where to find him. He was eminently distinguished for soundness of judgment and integrity of character. Gladly would I record *specifically* his many virtues, did I not know that they are ineffaceably engraved on the hearts of all who knew him well. He was an admirable illustration of the noblest work of God —"an honest man." P.

March, 1858.

For the New England Farmer.

SCIONS, SEEDS AND SOILS.

MESSRS. EDITORS:—If I mistake not, the following query had, some time ago, a place in your columns; viz:—"When scions are taken from a fruit tree, and grafted upon stocks raised from the seeds of that same fruit tree, will any advantage or detriment result from the practice? or is it simply immaterial?"

No response, from any quarter, was given to this inquiry. Possibly if now repeated, it might attract the notice of some horticulturist, competent, from his own experience, to satisfy the doubt.

Another point of interest, not yet settled, is this. "In selecting a suitable soil for a fruit tree, should the ground be chosen with reference to the graft, or to the stock?" In the case of pears on quince stocks, it seems to be conceded that the soil must be adapted to the quince. Yet, on consulting the several fruit books now extant, it will be found that each fruit is described as requiring a certain kind of soil, without reference to the stock on which it may be growing. How is this matter to be understood? As the roots proceed from the stock, it would seem reasonable that the ground should be such as the stock would best thrive in. But, as fruit trees are grafted indiscriminately on various stocks, how was it discovered that certain soils were adapted to certain varieties of fruit?

If fruit trees can henceforth be grown upon their own roots, by M. Dochmahl's method, or by any other mode, then it will be practicable to ascertain the soil suited to each variety, or if scions may be grafted on seeds obtained from the same tree that produced the scion, it may be presumed that the soil would affect both stocks and graft alike, but how the point is to be determined when several varieties of fruit trees are growing on stocks of other unknown varieties, it is surely difficult to understand. FAR EAST.

February 23, 1858.

A SIMPLE REMEDY.—A writer in the Baltimore *Sun*, who has been afflicted severely in his family by that appalling disease, bronchitis, has found relief from the following remedy:—Take honey in the comb, squeeze it out, and dilute with a little water, and wet the lips and mouth occasionally with it. It has never been known to fail, in cases where children had throats so swollen as to be unable to swallow. It is certainly a simple remedy, and may be a very efficacious one.

DEATH OF COL. NEWELL.

The intelligence of the death of Col. NEWELL came to us like one of those unexpected and startling calamities which occasionally arrest the thoughts of man, and show him how true it is that "in the midst of life we are in death." It seems but a week since we saw him with a steady step, a clear eye and comprehensive intellect, actively engaged in the concerns of life, and with earnest desires to promote the happiness of all; but without a warning note having reached our ear, we heard that he had been called from the earthly scenes which he had so long dignified and adorned. His step has ceased, his eye become dim—but that intellect which guided him so wisely here, and through which he conferred so many benefits upon his kind, we cannot doubt is already effulgent with new illuminations from the Creative Power.

Col. Newell was well educated as a citizen of the world; he was gentle and unassuming in his manners, discriminating and sound in his judgments and firm in his opinions, though he never pressed the latter upon his listener. Though often called to the discharge of public duties, he preferred rural life, and found his chief enjoyments in the bosom of his family and in the congenial occupations of the farm.

He had long been an influential member of the Essex county agricultural society, acting for several years as its President, and was an active and useful member of the State Board of Agriculture, where his unostentatious and winning manners, and the general correctness of his views, led all to look upon him as a safe adviser.

Let us cherish his memory and emulate his virtues, and be ready for the call which summoned him in the midst of his labors and usefulness, and like a shock of corn ripe in its season.

A NICE POINT OF LAW.—I heard this anecdote from a gentleman long resident in Philadelphia. Two Quakers in that place applied to their society, as they do not go to law, to decide in the following difficulty. A. is uneasy about a ship that ought to have arrived, meets B., an insurer, and states his wish to have the vessel insured. The matter is agreed upon. A. returns home and receives a letter informing him of the loss of his ship. What shall he do? He is afraid the policy is not filled up, and should B. hear of the matter soon, it is all over with him; he therefore writes to B. thus: "Friend B., if thee hasn't filled up the policy, thee needn't, for I've heard of the ship." "O, O!" thinks B. to himself, "cunning fellow; he wants to do me out of the premium." So he writes thus to A.: "Friend A., thee be'st too late by half an hour; the policy is filled." A. rubs his hands with delight; yet B. refuses to pay. Well, what is the decision? The loss is divided between them.—*Rev. John Eagles, in Blackwood's Magazine.*

For the New England Farmer.

UNDERDRAINING AND IRRIGATION.

That underdraining is not needed on most of our land in this country, I infer with much confidence from the acknowledged beneficial effects of mulching,—a process, by the way,

"For which the speech of England hath no name;"

simply, I suppose, because where draining *is* really necessary, any such expedient as mulching *is not* necessary. I do not speak of mulching as a substitute for draining; and, therefore, do not care to inquire whether it is practicable in ordinary farming. The principle of its operation may be tested in the garden or orchard as satisfactorily as on the whole farm. That principle I rely upon as an argument against draining. My own experience, and that of others who have published the results of their trials, show that mulching benefits vegetation chiefly by keeping the surface of the earth moist and loose in our hot and dry summers. As straws afloat in the air show the direction of the wind, so "straws" spread upon the ground may show the direction farmers should take in their efforts to promote the growth of their crops. The principle, then, which I regard as conclusively demonstrated by the effects of mulching is, that a deficiency of moisture, not an excess, is what American farmers have to fear and guard against; and the inference, a very natural one, is that they should "govern themselves accordingly."

With these views, and in one of those "dry spells" that occur almost every summer, when the broad leaves of that salamander plant, our Indian corn, roll themselves into flabby strings, and when wells, twenty, thirty and forty feet deep, "give out" entirely, is it not rather more refreshing than instructive to retire into a cool library, and read, as we may, from a portly volume, backed in golden letters, "THE AMERICAN FARMER'S ——," the timely assurance that "The *very first* care of the farmer, that on which the success of his future crops *almost entirely* depends, is the removal of unnecessary supplies of water?"

As it is possible that some one may reply to the argument drawn from the effects of mulching, that it is superficial,—that, at best, it relates only to the surface of the soil, while watery billows roll below, I will now try to go a little deeper. Though claiming the ability to see as far into a mill-stone as most people can, I feel much satisfaction in being able to take for my subterranean guide so distinguished a gentleman as Dr. Hitchcock, and will let him, as spokesman, report:

"It is well known to the chemist that most of the salts, so useful upon lands, are dissolved by rains, and carried downward through the soil till they meet with a water-bearing stratum. There they will accumulate; and now let that stratum—known by springs issuing from it—be dug up and spread over the surface, and these salts will exert their appropriate influence upon the crops. This very principle is the chief secret of the good effects of subsoil plowing, and I doubt not but it will yet lead to valuable results in the use of substances drawn from a still greater depth. In some instances they certainly have produced astonishing effects."—*Hamp. Ag. Address*, 1856.

Now if the pot be not allowed to call the kettle black, why should those who underdrain their soil, and thus empty these valuable "salts" through carefully laid tiles into the ocean, or some other safe place, laugh at the folly of those old-fashioned farmers who "underdrained" their cow-yard, pig-pen and manure-heaps?

Whatever may be thought of the pertinency of this question, I must confess that it is not original with myself. Some time ago a stray number of the *Mark Lane Express*, an English agricultural journal, fell into my possession. It is lost now, but I remember that the leading editorial article was devoted to a discussion of the subject of draining. In the course of his remarks, the editor puts into the mouth of a regular old-style John Bull farmer, whom he pretended to have met at a certain fair, divers objections and arguments against draining, among which was, in substance, the above question. It appeared strange to me that an agricultural paper in England should venture to give so many suggestive hints against draining, although it was done in the words of a mere "clodhopper." I thought it clearly indicated the existence of doubt, in the mind of at least one able English agricultural editor, of the infallibility of Thorough Draining as a specific for every ill farming is heir to. From my slight knowledge of English agriculture, I suppose that draining, like the much vaunted Tiptree farming, is rather the plaything of capitalists than the work of practical farmers—that, in fact, drainage is the exception, not the rule, of tillage land even in England.

This digression has carried me so far from Dr. Hitchcock's remarks, and I am so willing to leave them to make their own impression, that I shall not attempt to return to that branch of my subject.

In the next place I object to tile draining, that it is exhaustive. It adds nothing to the soil. It is not a fertilizer. No one will dispute these positions. In a long list of the benefits ascribed to thorough draining, on the last page of the monthly *Farmer* for 1856, is the following: "It hastens the decay of roots and other vegetable matter" in the soil! A statement far more encouraging to the race of farm-skinners than to those who wish to improve the soil. This singular "benefit" of draining suggests another thought. By "hastening the decay of vegetable matter in the soil," an apparent improvement in crops may for a time be ascribed to drainage, which should be credited to the gradual impoverishment of the soil, consequent on this very decay of its vegetable matter. Especially in a highly manured and long cultivated country like that of England, a lowering of the water-line from within a few inches of the surface to the depth of several feet, might be followed for a time by results that could not be anticipated in a poorer soil, or in one whose saturated subsoil has always been much farther below the surface of the earth.

In conversation a few years since with a Connecticut River farmer, on the comparative merits of the soil of that valley and the more heavy soil of the Champlain valley, one remark was made that I have not forgotten, and which I will repeat in this connection. The Connecticut River farmer said, "What we lack is a bottom to our farms." I understood him to hold, with Dr. Hitchcock, that on the porous subsoil of his farm the salts of the manure were carried downward through the soil beyond the reach of plants,

while the more volatile portions escaped into the air. He wanted a "bottom to his farm"—something that would hold the manure—the vegetable matter—and the soil, too, from the constant leaching to which it was already subject. Would thorough draining meet his case?

An observing townsman, who has spent some time in California, informs me that the river bottoms only, so far as he saw, were cultivated in that State. On these bottoms, he says, the soil is constantly moist almost to its very surface. Here grow the monster vegetables of which we have so often read. The soil there which is not thus kept filled with moisture, bakes and cracks in the dry season, and cannot be cultivated at all, until by some means the land shall be irrigated.

When I closed my first article, and when I wrote the heading of this, I thought I should have ample space for some remarks upon irrigation, after giving my reasons for believing that, in this country, draining will long be confined to swamps and low lands, which constitute a very small proportion of the soil either of New England or of these United States. But I have filled my sheet, and may as well stop where I am. Wishing, however, to make my bow in good company, I will append the following statement from the writings of Prof. Nash:

"I have often described our most common qualities of New England soil to English farmers, and asked what would be the effect of draining such lands; and I have received for reply, that it would but lose to the owner all the money expended in the operation." S. F.

Winchester, Feb., 1858.

For the New England Farmer.

MERCY TOWARDS ANIMALS IS ECONOMY.

The teamster, who loads his dray or wagon so heavily that the horse or team attached to it cannot draw it but a short distance, without being so exhausted of strength as to be unable to proceed, without stopping to rest, or breathe awhile, is an unmerciful and an unwise man.

Whoever practices such a mode of loading his team is ignorant of true economy, and is wanting in merciful feelings—is inhuman. It is ever injurious to the beast of burden or draft to overload him; such loads as require the exercise of the full, or nearly the whole strength of the animals to move them forward, strain their nerves and sinews and stifle them. The over-driven or over-worked horse is injured in his strength and speed. It is uneconomical to manage and use a horse in such a manner as to impair his usefulness and value. It is most unwise to lessen by our usage, more than necessary, the market value of our working animals, to shorten their lives or their periods of serviceableness. It is great folly to so use a horse, that would, with kind and wise management, be serviceable for ten years, as to curtail that term of usefulness to six years.

The motto, that "time is money," is true indeed. By over-driving or over-loading, we impair the speed of the carriage and dray horse. We lose time in their lessened speed and activity afterwards. We occasionally see drays, sleds, and wagons, so heavily loaded for the horses or teams attached, that they cannot be moved but a few yards or rods, without so fatiguing the animal as to require rest, and may be, with difficulty the load is started after such pauses or stoppings. The horses are much injured by straining, to haul such loads, and much time is lost by such mode of dragage. It would be more expeditious and economical to go oftener with lighter loads. It is better to go twice, in transporting flour, than put on one barrel too many for a load. It is an injury to the harnesses and carriages, when the load is too heavy for the team. A sled is much racked by the swinging to and off of the team in endeavoring to start. Heavy loads rack and strain the carriage ever. It is ungentlemanly to so load a team that its movements pain and shock the sensibilities of street passengers. The act of overloading is accursed.

P.

For the New England Farmer.

GUANO.

MR. EDITOR:—I am a common man, cultivating my own acres to acquire a comfortable support for my family and myself; and have no time to institute accurate comparative experiments. I have endeavored to learn whether it was worth while for me to buy guano, at a cost of three or four dollars per hundred pounds. The first thing I learn about it is that it expends its strength the first season; the second is, if the article is of good quality it needs to be mixed with some diluting substances. The third is, the quantity you obtain for your money, as compared with good manure, is so small that I am satisfied it is better to make compost at home, or purchase good manure from the stable, and to leave the bags of guano to those who deal in fancy articles. I have applied guano, with good success to grass land, just before a rain, doubling the crop as compared with like grounds next adjoining; but I have never seen very beneficial results, when applied to hoed crops. If it be true, as I believe it is, that its virtue will be expended the first year, I doubt whether it will be found worth purchasing. I have heard it said that the most careful analysis will not distinguish the difference in soils, where 500 pounds of guano has been applied to the acre, and where none has been applied. This being so, it shows that there is little reliance to be placed in analysis, or that there is little virtue in guano. ARATOR.

March 20, 1858.

VALUE OF CLOVER HAY.—H. Capron, of Illinois, who has been largely concerned in the dairy business, (having sold $6000 worth of milk in a single year,) informs the *Country Gentleman* that he made accurate experiments to test the comparative value of timothy and clover hay. These experiments extended through a period of two years, were accompanied with accurate weighing and measuring, and the food was changed from timothy to clover and vice versa, once a month, and results were that the clover hay yielded ten per cent. more milk than the timothy. It will be observed that this was not a single experiment, but a series of experiments extending for a long period. It is proper to state that the clover was well cured.

For the New England Farmer.

DESTRUCTIVE INSECTS.

MR. EDITOR:—I made a note of an article with the above heading in the *New England Farmer* of October 31st, written by Mr. S. Brown, a writer over whose signature I always expect to find something worth reading. In that article, occurs the following passage: "There is a natural law operating among reptiles and insects, and all animals which multiply to excess, which causes nearly their extermination periodically."

I am glad to see attention called to this subject, for I believe that, until we arrive at a sufficient knowledge of what these causes are, to enable us to *co-operate with them*, we shall produce about as much effect as we should by sweeping back the tide with a broom.

We may, it is true, save the fruit of a single plum tree, or the blossoms of a single rose bush, from the depredations of the curculio and rose-bug for a single year, but unless the same efforts are renewed every year, a new and countless army will come from some other source, ready to destroy each succeeding crop.

I know it is a favorite method of enforcing the importance of destroying insects, to exhibit their rapidity of increase, and show us what numbers are nipped in the germ by destroying a single individual; but let us look at the other side; take, for instance, the common caterpillar; Downing says, "each female lays from two to five hundred eggs;" allowing the number of males and females to be equal, and taking the lowest estimate, suppose out of each hundred caterpillars scattered over our orchards and forests, many of them in almost inaccessible places, we succeed in destroying ninety, this will give us one thousand next year, in place of one hundred this. I would not, however, discourage any one from making war upon the caterpillar, even with our present knowledge of the subject. I only wish to show the value of such calculations.

Perhaps I shall be told, many cultivators save their plums and other fruits from the ravages of the curculio, and that there are many simple remedies which are often successful. That brings us exactly to the point. Show me a cultivator who succeeds in raising a good crop of plums every year, and I will grant that his skill or location, produces this result; very probably the former; but to one living as I do, in a region where a majority of the farmers leave their fruit trees to take care of themselves, it is not difficult to see how these remedies originate; some natural cause keeps down the curculio for one season, and every remedy, tried for the first time during that season, succeeds perfectly.

But to treat my subject more directly, the causes which, according to my observations, appear to have had most effect in producing the partial extinction of various species of insects, are *parasitic insects, late spring frosts*, and *cold*, at a certain stage of their development. I have observed the first particularly with the common caterpillar; some few years since, our orchards were so infested with this pest, that whole trees were entirely stripped of their foliage by them, but suddenly their ravages almost ceased, and I perceived that after the nests had gained about half their usual size, they appeared to be deserted. I at first attributed this to the Oriole, but on closer examination, I found the remains of the caterpillars evidently eaten by some parasite. This insect is now again on the increase.

Of the effect of late frosts, I do not feel quite so sure, but think the large black pumpkin bugs were nearly exterminated by the frost in 1834. Perhaps some of your readers will recollect that in many places, nearly all the apples were killed that year, by a frost, while the trees were in blossom, about the middle of May, I think. These bugs, which had destroyed most of the vines for several years previous, did no damage at all that season. The past year witnessed another general disappearance of this enemy, although not as complete as before, and this time it was not accompanied by severe spring frost, but I would suggest, whether the cold, wet weather may not have had some agency in it?

In an article on this subject, in the *Country Gentleman* of August 13, Mr. LEVI BARTLETT, of Warner, N. H., says he has not seen the first black bug this year, and not over half a dozen striped bugs; if this should meet his eye, will Mr. B. give us his opinion?

Cold weather, accompanied by high wind, I think reduced the number of rose bugs at least nine-tenths in one season, a few years since. Those who have observed the habits of this beetle, are probably aware that they make their appearance about the time of the first blossoms of the common white rose, and are most abundant in the first part of the hay season, especially in very warm, sultry days; at least, they are much more active on such days, and they fly with difficulty when the wind blows. Now for several weeks of the year alluded to, just at the time for them to come, we had almost continual cold windy weather, and very few rose bugs were seen, and although they have been increasing most of the time since, they are not near so numerous now as previous to that time.

I throw out these hints to call farther attention to this subject, with the hope, that some of your readers, who are better acquainted with entomology, may make farther observations, and give us information by which we may assist nature in this work, as perhaps we might do, by preserving the parasites which feed on these noxious insects, by exposing our cultivated grounds more to the action of frost, or by giving more shelter to birds, by planting evergreens, and retaining a larger proportion of our forests.

Meanwhile, I would suggest that every reader of the *Farmer* "keep his eyes open" during the insect season, make a note of all important facts, and communicate them for the benefit of all concerned.

WM. F. BASSETT.

Ashfield, Mass., 1858.

TO PREVENT HENS SITTING.

Make a small, open pen of laths, or some similar material, in one corner of your hen-house, about eight inches wide, and of any convenient length and height. Let one of the laths or slats be so secured that it may be easily taken out or moved one side, so that a hen may be conveniently passed into or taken out of the pen. On the bottom of this pen, and running lengthwise through it, set up a couple of laths on edge, and

fasten them about the same distance from each other, and from the sides of the pen. Run a small perch across the pen and the work is done. When a hen wishes to set put her in there. She will soon find that she can walk leisurely upon the floor, or roost comfortably upon the perch, but she can't sit without "riding on a rail," and that, they seem to think, isn't decorous. The length of time for which they will have to be confined will vary somewhat, and in obstinate cases it may be necessary to put a few pegs or tacks into the edges of the laths.—*Genesee Farmer.*

For the New England Farmer.

FEEDING OATS TO SHEEP.

Articles in late numbers of several papers condemn the use of oats as feed for sheep, the writers avering that they cause the sheep to bring weakly lambs.

Mr. O. S. Cummings, of Trenton Falls, N. Y., says:—"I had three choice ewes last spring. I fed them two quarts oats daily, through the winter, except as they were fed twice a week on carrots, when the oats were omitted. They dropped four lambs and all but one died." Another writer in Fairfax county, Va., says:—"I have a small flock of breeding ewes, and fed as follows: First winter, no grain except corn; raised every lamb. Second winter, fed corn and oats; raised 50 per cent. of the lambs. Third winter, fed corn daily; raised 95 per cent. Fourth winter, fed corn liberally until February, and then oats daily, until they were turned to pasture; lost 80 per cent. Why there has been such disparity in my success in raising lambs while there was uniformity in the treatment of the flock, with the exception of the grain, is to me a mystery. It never entered my mind to look into the oat bin for the cause, until reading the suggestions in the paragraph on 'Feeding Oats to Sheep,' in *Rural New-Yorker.*"

Now, Mr. Editor, are these things so? I have been in the habit of feeding oats to sheep for quite a number of years and have never noticed anything detrimental arising from it; and I am inclined to think that in the case of the above writers, if they had not kept their sheep so well they would have had better success; two quarts of oats daily would be pretty full feed. It is generally understood in this part of Vermont that a breeding sheep will do better not to be in very high flesh, or as the saying is, "fat as a hog." As this is an important question, I would like to hear the experience of some of our Vermonters upon it. SOLON H. BERRY.

Thetford, Vt., 1858.

REMARKS.—So should we, and hope it will be fairly discussed.

TO IMITATE CORAL BASKETS.—Make the basket of pasteboard in any shape you please; dissolve three sticks of sealing-wax in a pint of alcohol; wet the basket with this mixture, and sprinkle on rice which has been about half ground; let it dry, and repeat the process until the pasteboard is covered, after which paint it with the mixture until it is red enough. A brush of hair or feathers should be used.

WHAT THE WORLD MIGHT BE.

God's world is worthy of our love,
Were kindly deeds done to each other,
Were creeds and castes blown to the winds,
And man in man beheld a brother.
A world of beauty, bloom, and song,
Would each exert his noble powers
To plow the stubborn glebe of wrong
And plant again love's Eden flower.

God's world is worthy of our love,
With all its sorrow, crime, and madness;
And heaven or hell dwells in the heart,
As man exists in grief or gladness.
Man will be better, better loved;
No heart was ever lost by kindness;
One word of mercy might have saved
Souls that, like beacons, sunk in blindness.

God's world is worthy of our love,
If labor did its fruits inherit,
If blood ne'er ruled instead of brains,
And wealth ne'er placed its heels on merit.
That nobler name than King or Lord—
The name of Man—O! guard and cherish;
And Freedom's sacred lands shall live,
When guilty thrones and crowns shall perish.

God's world is worthy of our love,
When joy, like music, thrills heart-chords;
When smiling lips do arch their bow,
And in the heart loose golden words.
The heaven we pray for would be here,
If each would bravely do his part
To crown with joy one cheerless home,
To crown with love one human heart.

EIGHTH LEGISLATIVE AGRICULTURAL MEETING.

Hon. Mr. EARLE, of the Senate, presided. After a modest expression that he should have preferred some one more competent to be in the chair, he went on to speak of his experience in the culture of fruits—particularly the pear—and some of the modern and preferred varieties. He spoke particularly of the *Beurre Clairgeau*, which he considered a fine grower, and a good bearer, and as worthy of cultivation as any other.

He called upon Mr. PROCTOR, of South Danvers, who fully confirmed all that he had said about the Beurre Clairgeau pear, having witnessed the culture of the same by his neighbor, who had awarded to him the first premium for pears in Essex the last season.

Mr. PROCTOR also spoke of the very fine apple orchard on Mr. Ware's farm in Marblehead, on which grew three hundred barrels of superior winter apples the last season—worth, at least, $3 per barrel. These trees were understood to have been growing in the orchard about twenty-four years, and to have been attended with the same care as is applied to everything else on this well managed farm. Mr. Ware's land is first rate to begin with, and he neglects no opportunity of fertilizing it in the best manner, always having regard in what he does to the utility of the thing. He is no fancy man—but one of the right sort of cultivators.

Mr. BROOKS, of Princeton, inquired as to the profits of growing orchards—whether it would pay? The general expression was that nothing could be done more advantageously on our farms —but no one appeared prepared to present an account stated.

Mr. DODGE, of Sutton, spoke of his culture of orchards, and of the decided benefit to be expected from such culture.

Mr. JOEL LAKE, of Topsfield, spoke of his experience of twenty years in the culture of trees. The first thing, he said, was to find the right place to set them; the next was to take good care of them after they were set. This being done, there was no doubt an orchard would pay, and pay liberally, too.

The President named several other varieties of pears and apples particularly worthy of culture.

Several other gentlemen narrated their experience. The meeting was prolonged to past ten o'clock, and all appeared to be satisfied that their time had been well spent.

For the New England Farmer.

CULTURE OF ROOTS.

Are roots, such as beets, carrots, turnips, parsnips, &c. &c., worth cultivating as feed for stock? It had not occurred to me to think otherwise, until I saw the suggestion in the *Farmer* of this date (March 6th)—and forsooth because so large a proportion of their substance proves to be *water*. Admit this to be so, it by no means follows that they may not be the best of feed. We have very imperfect ideas of the processes of nature, by which the size of animals or the growth of plants is advanced. We have no such well established analyses as will enable us to lay down certain rules on the subject. What though it should prove, on examination, that potatoes are composed of *three-fourths parts* of water—does this prove they are not fit to sustain animals that feed on them? and that the animals would thrive just as well, on taking the same quantity of *water*, in a different form? I think not. I have seen animals that had constant access to the purest fountains of water—but it never occurred to me to think that water alone would sustain animals. We know just about as much of animal growth, as we do about soil analysis which is in fact nothing at all, notwithstanding the puffs of certain persons to the contrary. ESSEX.

March 6, 1858.

PEA BUG.—The editor of the *Ohio Farmer* recommends every one to steep their peas in boiling water, in order to kill the pea bug, and thus lessen the reproduction of this insect, which all lovers of peas detest. If *all* would do this, we have no doubt it would soon lessen the prevalence of the nuisance. It is also suggested that the remainder of the crop, or those not intended for seed, be exposed to a slight kiln drying in the fall or winter, to destroy the "bug."

LETTER FROM THE SANDWICH ISLANDS.

[*From our own Correspondent.*]

MAKAWAO MAUI, HAWAIIAN ISLANDS. }
December 15, 1857. }

EDITORS NEW ENGLAND FARMER:—*Gentlemen*,—The earth at Makawao and Kula, our wheat-growing country, is now being "visited, watered, and greatly enriched with the river of God which is full of water." Blessed be His name, giving doth not impoverish our heavenly Benefactor. How suitable that husbandmen, of all others, may I not say, should feel deep emotions of gratitude to God. How much of Him, so to speak, do they see. How much is he doing for them. Your readers are all familiar with the lines of Pope which many a schoolboy in each effort at learning to speak has spouted:—

> "Ask to what end the heavenly bodies shine,
> Earth for whose use? Pride answers 'tis for mine;
> For me kind nature wakes her genial power,
> Suckles each herb and spreads out every flower.
> Annual for me the grape, the rose renew
> The juice nectareous, and the balmy dew."

This is indeed ridiculous enough uttered by a vain and ungrateful recipient of the divine bounty. But substitute *husbandman* for *Pride*, and give him a humble heart, a grateful temper, and he may well adopt the language of the poet. Surely for his use is the earth who cultivates it, and for his special benefit do the heavenly bodies shine, warming the bosom of the earth and causing it to bring forth abundantly for his sustenance. Who can deny that for the husbandman more than for any other mortal, doth God cause nature to wake her genial power, clothing the fields with beauty and fruitfulness? Is it not a pity that so few of this class, numerous and strong for labor, seem to understand the dignity and importance of their calling? I say, "so few;" for though I am happy in the belief that the number is increasing, still I fear that multitudes of farmers hold on to the cultivation of the soil not because they delight in the employment, but because they know of no other way of obtaining a livelihood. They toil away like bond slaves, and some of them, perhaps, determine secretly to abandon their occupation, as soon as they can find some other business more congenial to their tastes. Is it not a pity that this noble, invigorating, God-given employment should be thus slighted, not to say despised, by so many sons of New England; that so many of them should pine for the city while the means of health and competence, with peace of mind and manly intelligence, lie all about them in the sweet country air and in the soil which may be truly said to have nourished and brought them up from their birth? Who would exchange these for the heat and confinement and the temptations of a crowded city? Many have done so to their great loss.

Need I then exhort your readers to be awake to the importance of agricultural pursuits, or to suggest that they educate as many of their sons as possible in the mysteries of farming? Even should one-half of them choose a professional life, it would be no disadvantage to them to understand the theory of farming, and enough of the practice, too, to carry with them to the pulpit, or to the bar, or to the sphere of the physician's practice, a vigorous constitution. The read-

ers of the *Farmer* certainly do not need a homily from a Hawaiian pastor on the benefit of farming. They see enough in your excellent periodical. Allow me, however, to say that I have lately read an essay on "Farm Life, a School of True Manhood" by the Rev. William Clift, of Stonington, Ct., which I think valuable, and which I desire to commend to the attention of your readers. I do not know the writer, though I have some acquaintance with his locality, having spent my early boyhood in the counties of New London and Windham. I wish every farmer in New England could read this essay. Mr. Clift nobly advocates the work of the cultivator. He writes like one who has some experience in the business. For aught I know, he may have been compelled from feeble health to devote a portion of his time to laboring on the farm. Like the late Rev. Isaac Robinson, of Stoddard, New Hampshire, who devoted much of his time from ill health to this business, though he gained and held, while he lived, the reputation of a close student, and an uncommonly able minister of the gospel; I know another minister whose health demands that he toil twelve hours a day, who is yet an indefatigable student. I love to hear such men speak on the influence of farm life to the development of true manhood. If I am not mistaken, the business of toiling on the farm had, in their case caused such a development.

Allow me to say that on looking back on my life spent in the United States till thirty years of age, first in Connecticut, then in Vermont, afterwards in Western New York, and finally in Massachusetts, I plainly see the truth of the proposition which Mr. Clift lays down in this article, and which it is his object to establish, viz.:—"Farm Life a School of True Manhood." Yes, as I recall early scenes, go from one end to the other of this and that parish, and look in upon the families which I knew in my boyhood and youth, I plainly see that the farm was indeed the school of true manhood. I love to think of the farmers of those towns. They composed the backbone of society and the church. One of them after whom I named our only son, was qualified to be governor of the State. Indeed, many of your readers know that more than one governor of Vermont was a practical farmer. They were the deacons in our churches, our town officers, and our representatives to the State Legislature. I say this the more freely as it was not my privilege to be brought up on a farm, though I belonged to the working class, still, except in haying and harvesting, I seldom wrought in the field. My sympathy was rather with the mechanics, many of whom, I beg leave to say, were intelligent and noble men, though, on the whole, the farmers as a class were more manly, hardy and wealthy. One advantage farmers have always had of mechanics I may mention, is the leisure of long winter evenings. While mechanics of almost every sort were compelled to toil by candle-light, and to a late hour, farmers used to sit by the fire, and might spend their time in reading and profitable conversation. Their superiority as a class when I was young ought to have been greater than it was; for though I freely admit that as a class farmers had a manly and noble character, I cannot at the same time forget that cider-drinking and story-telling during winter evenings effectually kept many of them from rising as intellectual men. Indeed the practice was in many cases ruinous. The thrilling tale of "Kitty Grafton" I never read without being reminded of scenes which I know to have been acted in my own town which nestles among the mountains of Vermont. How many of my old neighbors sleep in a drunkard's grave on the old hill, who learned to drink whisky, and brandy, and other foul spirits, from guzzling cider? I rejoice to believe that the practice of swallowing the juice of the apple has fewer advocates than formerly, and that winter evenings at farmers' firesides are now spent in a more rational manner than they used to be in dear New England.

Yours truly, J. S. GREEN.

For the New England Farmer.

HEMLOCKS AND WHITE PINES.

MR. EDITOR:—While perusing the pleasant letters of your correspondent, Mr. French, indited from foreign parts, and strolling in imagination among the scenes described, free of all suspicions regarding the truthfulness of the narrative, the "even tenor of my way" was rudely disturbed by the unexpected announcement, that our traveller wandering in the Schwarzwald, discovered the black mountains to be overspread with hemlock trees and white pines!

"All the world and his wife" are aware that the trees in question (*Abies Canadensis* and *Pinus strobus*) are held to be natives of the new world only. Mr. French's adventure and recognition, as detailed in his letter published in your January number, will create quite an uproar amongst the botanists. However it may be at Baden, these trees are very common in our forests hereabouts, and they fully bear out Mr. French's encomiums on the beauty of their appearance; though I regret to say that the greater part of the full grown specimens, majestic with umbrageous heads of a century's growth, have succumbed to the axe, and have been ignominiously converted into boards for the carpenter and logs for building wharves. *Sic Transit*, &c.

March, 1858. FAR EAST.

For the New England Farmer.

"OLD RED STOCK OF NEW ENGLAND."

MR. EDITOR:—We are glad to see by your last paper that there in one man among us who stands up for the "old red stock of New England." This is no new theory with Mr. P.; we remember to have heard a like opinion from him several years ago, when he addressed the farmers of Hillsborough county, and you yourself were present. We have lately seen an elaborate article on this subject, in the *American Farmers' Magazine*, a valuable paper published by Mr. Nash, at New York. The truth is, farmers are diffident in the expression of their real opinions of the value of natives, because they are not quite so fashionable. But if it is found that they can be fed at two-thirds the cost, and at the same time will yield quite as good products, is it not clear beyond a doubt, that it is best economy to keep them? GRANITE HILLS.

March 14, 1858.

EXTRACTS AND REPLIES.

FORESTS FOR WOOD.

I wish to plant an acre of very rich (loam) land to forest trees; will you give the information, as to what kind is best to grow wood fastest, where seed can be obtained, and the best way to plant and manage, also, what time is best to plant? and oblige, WM. H. L.

REMARKS.—Mr. B. F. CUTTER, of Pelham, N. H., can probably answer these questions, so as to be of value to you. See a long article of his on "the cultivation and preservation of forests," in the *Monthly Farmer* for January, 1856; also, several other articles, same volume, pages 217, 222, 258. Some of the seeds of forest trees may be obtained at the seed stores,—but generally, they must be ordered in advance.

AGE OF SEEDS.

Will you or some of your correspondents furnish me through your paper, the length of time that the following seeds may be kept on hand before they will lose their vitality?

Sharon, Mass., March, 1858. PATRON.

	Years.		*Years.*
Beet	4	Tomato	5
Carrot	2	Celery	3
Parsnip	1	Beans	3
Cucumber	6	Peas	3
Squash	6	Sage	3
Melon	6	Saffron	1
Turnip	4	Summer Savory	2
Cabbage	4		
Lettuce	3	*Flower Seeds.*	
Radish	3	Balsam	5
Pepper	4	German Aster	3
Onion	1	Pink	2

REMARKS.—We took the above list to Mr. GWYNNETH, one of the firm of Nourse & Co., Boston, and who attends to the seed department of that establishment, who placed the above figures opposite the name of the article in question. Mr. G. states, however, that the long-continued vitality of seeds depends upon so many circumstances, that no certainty can be expected unless the seed was gathered when in *proper* condition, *carefully* cleaned, so as not to bruise or otherwise injure the seed, and *thoroughly* cleaned, so that no foreign matter shall excite fermentation or dampness and mould, and then kept in proper packages in a place pretty uniformly dry. When these conditions are all complied with, he would have no hesitation in guaranteeing that most seeds will germinate at *double* the length of time he has set down above; but they should never be placed where the heat is more than 60°.

SPAYING COWS.

It will not answer. Nature must have its course in some measure; it is best; it is profitable for a cow to go dry one, two or three months in a year—the milk is better and more of it, in a year.

Plainfield, Mass., 1858. G. V.

REMARKS.—If we did not arrest nature in her course in a good many things in farming, we should probably have queer results, both with animals and plants. It is a fruitless effort to attempt to put down scientific results by mere opinions. All the reasoning in the world would not convince Massachusetts farmers that it is best never to graft an apple tree, even if it is a violation of nature; and so of many other things.

A RAT? OR WEASEL? OR WHAT?

I recently found upon the cellar bottom an animal which the cat, I suppose, had caught and killed, that was milk white, except a tuft of hair on the end of the tail, which was black. It was as large as a fair sized rat, and had all the appearance of a rat, except the color and tail, the latter being shorter and covered with hair which was somewhat bushy at the end. I at first supposed it to be a white rat, but the strangeness of its color caused me to examine it more particularly, and I began to doubt whether it could be one, and the more I reflect upon it, the more certain I feel, it must be some other species of animal.

But what it is, or where it came from, is beyond my knowledge, having never seen anything of the kind before. It has been suggested that it might be a weasel, but it has nothing of the shape and appearance of a weasel, but in all particulars excepting those named above, it strongly resembles a common house rat.

If you, or any of your readers, can give any information in relation to such animals, it would be most thankfully received. A. S. SAWYER.

Harvard, Mass., March, 1858.

BONE SPAVIN.

Can you or your subscribers tell of anything that will stop a bone spavin from growing, and prevent it from making a horse lame, if taken in season? H. F. ROYCE.

South Woodstock, Vt., 1858.

REMARKS.—Dr. DADD's "*Modern Horse Doctor*" recommends as a remedy,

Muriatic acid	4 ounces.
Water	2 quarts.
Tincture of blood-root	6 ounces.

Applied daily by means of a sponge.

CRACKS IN TREES—PUMPKINS.

"S. W.," Waltham, thinks "cracks in trees are occasioned by water freezing in them, when the expansion causes the crack." But what caused the original crack?

RUSSET SWEET APPLES.

Some of the finest *Russet Sweet Apples* we ever tasted, have been handed us by Mr. JAMES EUSTIS, of South Reading, a gentleman well known as a successful cultivator of good fruit.

PROLIFIC HENS.

I have had four laying hens through the winter and they have laid from seventeen to eighteen eggs per week; they have been kept on a coarse food, roosted in a cold barn. One dozen of the eggs weighed 2 lbs. 1 oz. HINSDALE.

DORKING AND SHANGHAI FOWLS—SHORT HORN COW.

Where can I obtain pure blood White Dorking Fowls, at a fair price, and the Grey Shanghai spoken of in the *Farmer*? Also, a good short-horn cow, and what is a fair price?

Foxboro', 1858. H. S. SWEET.

REMARKS.—The fowls may be obtained of JAMES MANN, 6 City Hall Avenue, Boston, at $2,50 to $4 a pair.

You can probably obtain the short-horn cow of Paoli Lothrop, of South Hadley, Mass.

A NEW SUGAR BOILER.

Mr. J. A. FRENCH, of North Clarendon, Vt., sends us a drawing of an ingenious invention of his own, for economizing fuel and equalizing heat in the process of boiling sugar. These objects are of much importance and will be fully accomplished by the design of Mr. French. It is also adapted to boiling vegetables, and other similar uses. As our space forbids a full description of the boiler, we refer our readers to Mr. French.

TRANSPLANTING LOCUST TREES.

I have several hundred locust trees to transplant in the spring, and would like to have Mr. Holbrook, or others, give their advice as to the cheapest and best method of doing it. The trees are seedlings from three to six feet high, and the land on which I wish to plant them, is barren, rocky pasture, descending to the north and much exposed to severe cold winds. Will they succeed without some fertilizer, and would it not be better to remove the tops entirely, planting only the roots. WM. F. BASSETT.

Ashfield, Feb. 10, 1858.

SLAUGHTER-YARDS—ASHES AND BONE.

Will you, or some one of your numerous correspondents, inform a subscriber as to the best mode of using a slaughter-yard so as to make the most of the manure? There must be valuable experience on the subject in the towns adjacent to Boston.

Also, what you think of using strong ashes mixed with ground bone, instead of sulphuric acid, which is not a very pleasant operation.

Amherst, Mass., March, 1858. HAMPSHIRE.

REMARKS.—We have had no experience with slaughter-yards.

Pure ashes mixed liberally with ground bone, think would form one of the best manures that can be used for almost all soils.

GREEN MOUNTAIN PIG.

Mr. William Spalding, of Cavendish, Vt., 77 years old, fatted and slaughtered a pig, nine months and three days old, that weighed when dressed, 424 pounds! A SUBSCRIBER.

"A SUBSCRIBER" at Shrewsbury, Mass., requests us to republish an article which appeared in our columns a few weeks ago, as he "has mislaid that number of the paper." If he will send his address, we will send him a copy of the missing paper.

HEMLOCK HEDGES.

The *Country Gentleman* gives the following directions for the cultivation of Hemlock Hedges, in answer to an inquiry on the subject:

The first thing is to procure the plants. If our correspondent can find a locality in the woods where young hemlock trees are abundant, he will have no difficulty in forming a hedge. The great requisite for success in transplanting is to remove a considerable portion of earth on the roots of every tree. If this cannot be done, they should *instantly*, on being withdrawn from the ground, and before the outside of the roots have dried in the least, be buried in wet moss,—or still better, if practicable, dipped first into a bed of thin mud, and then protected with moss. Another mudding, and puddling on setting out, will be of additional service.

If the young plants can be had from a nursery, where they have become hardened to open ground, they will be still better. We know of no nursery in the vicinity of our correspondent's residence more likely to supply good plants than that of Dell & Collins, of Waterloo, N. Y.

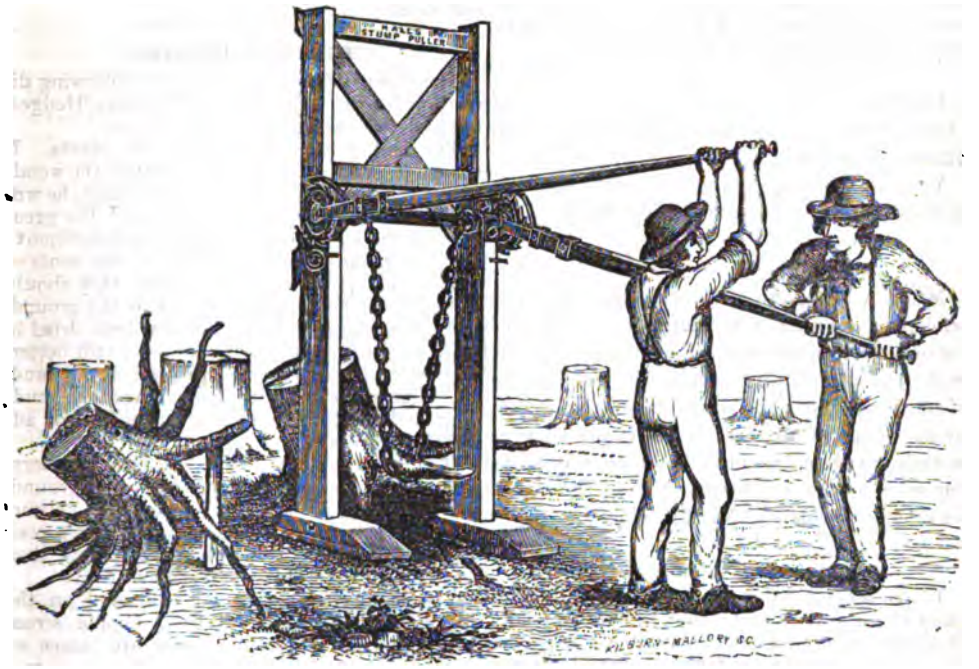
The mode of planting must depend on the objects of the hedge. If for a simple *screen* from the wind, and if the plants are scarce or costly, a distance of three or four feet apart will be near enough, to form in a few years a continuous line. But if a *hedge proper* is wanted, the trees should be within about a foot of each other.

The hemlock will make the handsomest screen or hedge of any evergreen known; it will bear almost any amount of shearing, and the hedge may be formed into a smooth wall of verdure, or be left for a tall natural growth. Either way, it is of surpassing beauty. If cattle or other animals cannot *see* through, they scarcely ever attempt passing, even a weak hedge.

HOW TO RAISE EARLY BEANS.

Plow, manure and prepare the ground well, as for common garden purposes, then make holes which will contain a peck or more of horse-manure and the usual litter that accompanies it. If for running beans, set the poles in the centre and then drop the beans upon the manure after treading it down slightly with the foot. Now scatter over the beans and manure *a very little* fine mould and then cover with clear sand. The warm horse-manure acts as a hot-bed, while the sand becomes heated above by the sun's rays, and has the further advantage of throwing up no weeds. In this manner beans and most other garden vegetables may be obtained very early.

WHAT ONE BEAN HAS DONE.—According to the Barnstable (Mass.) *Patriot*, Mr. LORING CROCKER, of that village, raised last season on one stock, and consequently from one bean, 106 pods, which yielded 453 beans!



HALL'S HAND POWER STUMP MACHINE.

We give above an illustration of a new *Hand Power Stump Machine.* Having no knowledge whatever of its merits, we give Mr. HALL'S own account of it, merely saying that we have examined the machine with some care, and can see no good reason why it will not prove valuable when put in operation. Mr. Hall says, "That two men can carry it about the field from one stump to another, and draw the largest pine stumps out of the ground by hand power, without digging around the stump or cutting any roots. All stump machines heretofore are objectionable for their high cost, great weight, expense of operating, unwieldy dimensions, &c.; but mine is superior for the following reasons: — First,—it is much cheaper—a great consideration to farmers on new land. Price $50 for No. 2, and right to use. Second,—it is much lighter, requiring no team of oxen or horses to remove it from one stump to another. Two men can carry it in their hands. Third,—It requires no team to operate it; two men can work it by hand, and extract more stumps, and at very much less expense, generally requiring about two minutes to take up a common stump. Fourth,—It can be used when and where the ground is wet and soft, and does not punch up the grass field as with a heavy team. Fifth,—It is very simple in its construction and not liable to get out of order, and so small that it can be housed as conveniently as a plow or wheelbarrow. Sixth,—It will take up every stump in the field, not requiring one to anchor to, as is usual with the best stump machines. Seventh,—It does not turn the stump over, thereby taking up a large quantity of earth from one place and heaping it up on another, as is usual with other stump pullers, but leaves the stump poised at a convenient distance from the ground, until the soil can be rattled off the roots into the bed of the stump, saving the labor of shovelling the heap back into the hole in order to leave the field smooth. Three men will pull up from 50 to 100 large pine stumps per day after they have worked two or three days to get their hand in, thus costing about six cents per stump, for such as usually cost from fifty cents to one dollar each.

HORSE RADISH— (*Cochelaria armoracia.*) — This plant is commonly cultivated by planting *cuttings* taken from the top, or by small offsets from the sides of the main root, so divided as to retain a portion of the crown. The cuttings or offsets thus obtained should be planted out in

April, or as early in the spring as the state of the air and soil will admit, in rows of from two to two and a half feet asunder, and from six to ten inches between the plants. The soil should be warm, deep and rich, and the plants, when set, covered with two or three inches of chip manure, or forest scrapings, mixed with wood ashes or hydrate of lime. No weeds should be permitted to grow in the lines, and the surface of the soil should be kept firm and light.

For the New England Farmer.

THE PAST WINTER.

While fresh in memory, let us record what we think of it. Neither cold nor hot, wet nor dry, but on the whole, a very comfortable winter—generally favorable to moving about, and but little obstructed by drifts of snow. Eruptive diseases, such as scarlatina and measels, have been prevalent, but not of a severe type. In the world of business there has been great depression and suffering, growing out of overtrading and inflated prices. Some will, of consequence, learn a hard lesson, by severe discipline; such things have before happened, and still the world goes on. Without such trials, life would be a stupid monotony.

In the western horizon, Kansas, with all its horrors and awful forbodings, has emitted a livid glare, but still there remains a hope of a brighter day—the sun of freedom has not yet sunk to rise no more. P.

April 1, 1858.

REMARKS.—It is well, thus briefly to record the general characteristics of a past season. In some respects they have been quite singular during the winter just passed. While it has been unusually mild all along the northern Atlantic seaboard, it has been cold in the South and West, and attended with much snow. In the south of Europe, too, and as far down as Egypt, we learn that it has been cold without parallel, and that the Pyramids have been covered with snow, looming up and having all the appearance of mountains of snow!

There can be no chance in these changes, but are all ordered for some wise purpose which our limited knowledge does not enable us to comprehend.

For the New England Farmer.

INDIAN CORN.

Your correspondent "P." appears to have relinquished his first idea of "humbuggery" in the measurement of Indian corn in the county of Plymouth, and is sufficiently courteous in his apology for the remarks he first made on the subject, but still maintains that the rules which govern us are fallacious. The writer thinks he has been, to some extent, influenced, though perhaps unconsciously, by the severe and false strictures of a genius that leaps before it looks. The writer never made any report of 145 bushels to the acre; one of his successors, however, has reported 150, it is presumed with fidelity in the observance of established rules; and whatever doubts may be cherished of there being that amount of good merchantable corn on the acre, no candid man who examines our doings from the beginning, will deny that there has been constant improvement in the cultivation of Indian corn, of which the citizens of Plymouth county may innocently boast a little. If "P." will make some experiments in weighing corn, he may convince himself there is not quite so much danger of deception as he has imagined. Usually there are several frosts before the corn is harvested; if those occur before it is fully ripe, the corn becomes very light and can safely be purchased only by weight. There are a few seasons in which there are no autumnal frosts till after the period of harvest; corn is likely in these seasons to be fully ripened; if there should be some fields where much of it remains in a green state weighing would be a less certain proof of the number of bushels to the acre, not so much from its excessive weight, as excessive shrinkage of the kernels in the bin. M. A.

Pembroke, March 2, 1858.

For the New England Farmer.

SPRING CULTURE.

Our gardeners are already busy in planting their onions and other seeds. Experience has taught them the earlier they are started to grow, the better their chance of matured crops. The casualties are so many now-a-days, that no man may calculate with confidence, upon what the autumn will bring forth. The small snows of winter and smaller rains of spring, have left the earth in favorable condition for the reception of seed, where the frost is entirely out; though there will soon be need of more moisture to make the seeds germinate. I learn that the prospect of blossoms on the peach trees is uncommonly good. So far as I have observed, the same is true of the apple trees; though there is much reason to fear the ravages of the canker-worm, its forerunner having been abundant, wherever tar has been applied, which is the best preventive to our knowledge. The labors of the field demand constant vigilance. It is not enough to pulverize and fertilize the ground, to carefully select and insert the seed; but hostile assailants of infinite variety, have to be watched and guarded against. SOUTH DANVERS.

April 3, 1858.

REMARKS.—The above was received a little too late for the weekly of April 10th, when it ought to have appeared.

PEAT, LIME AND POTATOES.—Mr. Philip O'Reilly, of Providence, R. I., states that lime is of no avail in preventing potato rot, as he has tried it, and has seen it tried by others in vain. After many experiments, he has found that a handful of dry peat in powder or small pieces was the best preventive, and he thinks if it were generally applied, it would save ninety-nine in every hundred hills.—*Germantown Telegraph.*

For the New England Farmer.

MAKING AND PRESERVING MANURES.

Agriculture is the philosophy of the earth—manure, the touchstone of that philosophy. There are many false philosophers as well as false teachers at the present time. Many of the leading writers in the agricultural journals of the day speak of ammonia, as if it were the "breath and life" of agriculture, and when it shall have been arrested in its escape, the whole principle of the manufacture of manure had been accomplished. The monotonous strain of these writers still lumbers along in the moulded ruts of false theory, because it is easy to follow in the wake of others. Some men have a rare faculty of deducing deductions from *non*deducibles. This is the basis of false philosophy. The lines of such reasoning lead men to false conclusions, for the reasoning seems plausible, and it keeps the company of science. But few men will dispute that manure is the basis of all successful farming in New England. Levi Bartlett, in the Boston *Cultivator* of the 23d ult., gives his method of securing the liquid manures. "Of the several materials used, I prefer leaves and leaf mould, next muck, and lastly *sawdust*; not that there is any manurial value in sawdust in its crude state, but it is an excellent absorbent." I think there will be birth given to a new idea, when it can be found that manure is increased in quantity or value by being mixed with materials having no "manurial value" of themselves. The American *Agriculturist* of Jan. last, page 11th, speaking of sawdust as an absorbent says:—"If ammonia is one of the most powerful fertilizers, why should not the greatest pains be taken to save it? For this purpose, sawdust is just the thing." The *Country Gentleman*, of Dec. 18th, 1856, says:

"SAWDUST AS LITTER FOR STABLES.

"Some weeks ago an article appeared in the columns of this paper, in which sawdust was mentioned and recommended as a litter for stables, which possessed a superiority over straw in several particulars. We have just noticed a communication in the *Farmer and Visitor*, (Manchester, N. H.,) in which the writer mentions several other advantages in addition to those which were named in the article referred to in our columns. Among the points in which sawdust was found superior to straw by the person who had tried it in N. H., the first mentioned is, that it occupied less room in the barn, which is not unfrequently, as in the case in this paper, a matter of some importance. Next, sawdust is claimed as superior to straw, because it absorbs more of the fertilizing matters about the stable, *the person using it being very sure that the ammoniacal emanations were less strong on opening the doors in the morning than when straw litter was used.* Next, it is said to be much less of a chore to clean the stable, and also, that so little comparatively had to be thrown out that one load lasted a long time. The next thing named as an advantage of sawdust as litter is, that the manure heap occupied so much less space than when straw was used, and thus admitted more easily of being protected by a covering from the wasting effects of exposure to sun, wind and rains. Then again it is an obvious advantage to have in one's yard manure in as *small bulk as possible*, and this is effected to a great extent by the use of sawdust. *The same amount of fertilizing matter is, probably, contained in one load of manure made from sawdust, as there would be in two or three loads of that which had been made from straw litter.* Then, too, in the field it would be free from all the trouble which long manure frequently gives.

"With so many points of *superiority*, we think it probable that sawdust will, hereafter, be more generally used, at least in the neighborhood of saw-mills."

The italics are mine. For your son's sake, once more read the lines italicised. The recommendation of the use of sawdust, or any other powerful absorbent for the mere purpose of arresting the escape of ammonia is fallacious.

The exhausted lands of New England can only be redeemed by the application of large quantities of manure. To succeed in this great enterprise, the farmers should all be in possession of barn cellars and manure tanks of sufficient capacity to meet the exigencies of the case. All highly concentrated manures should be diluted in several times their bulk in water, and turned or pumped upon compost heaps prepared for the purpose. Leaves and leaf mould, muck and native soil, are decidedly the best materials for this purpose. (By native soil, I mean the subsoil, or that which has never been subjected to cultivation.) Night soil, hog's dung, sheep dung and even cattle's manure, when highly fed, should always be diluted in several times their bulk in water, and turned upon less fertilizing substances.

Every family of five persons, by carefully saving all the chamber lye and dropping of the privy and diluting it in ten times its bulk of water, and turning it upon a heap of muck and native soil, can make enough in a year to plant an acre of corn and manure it well. Doct. Dana says a cow, kept up, and all of her urine and hard excrements carefully saved, will do the same. The economical saving of the soap suds of the laundry is a valuable addition to the manure heap; put it in the tank with concentrated manures. The dilution of hog dung when highly fed, and night soil, in many times its bulk of water, and turned upon leaves and leaf mould, muck and native soil, cannot be too strongly impressed upon the attention of farmers.

Immense quantities of manure may be made by farmers in close proximity to large villages, by securing night soil, diluting and applying it in this manner. Here in New England, we can only measure the amount of crops in acres by the manure on hand. The farmers of the rich prairies and bottom lands of the West can compute their acres of wheat or corn by the amount of team and labor on hand.

I know farmers in this vicinity, who have within two hundred rods of their barns a forest that yields a hundred loads of leaves and leaf mould a year, that never used a thimble full in their lives to my knowledge, that mow acres and acres that produce eight or nine hundred pounds of hay per acre, and farms running out, and yet they are "good farmers."

When will farmers make use of the redundant materials of the earth in the cultivation of their farms? This is the basis upon which the farming of New England is to-day carried on. I believe

the great principle of the restoration of our soil to fertility is in the application of large quantities of manure—the diluting of all highly concentrated manures in water, and mixing them with such materials as will hold them in a state of solution until required by the growing plant. Not one particle of sawdust should enter into this practice. All heaps of compost and manure should be kept sufficiently wet by continued applications of liquid manures to resist rapid decomposition and rot down, not burn or fire-fang. Let this system be but in full practice, and these beautiful hills and valleys of New England will again blossom as the rose, and no farmer will need send to New York or Boston to buy fertilizers at ruinous prices. The mixing of night soil and muck in the cities by the Liebeg philosophers, and sending into the rural districts at two cents per pound, would be at an end.

"Othello's occupation's gone."

For the purpose of putting this philosophy in practice, let us suppose a case:—Say I have a barn eighty by forty feet, with a good cellar under the whole of it, for the purpose of making manure. In the fall and winter I haul in fifty loads of leaves and mould from the forests, fifty loads of good, finely pulverized muck, (two years dug,) fifty loads of native soil from the bank. I keep ten cows for the purpose of making butter and cheese, beside five hogs, one pair of oxen and some young stock. The cows are to have good English hay and one quart of corn meal per day, which materially increases the value of their manure. Now I have a tank of sufficient size to dilute all the manure, placed immediately under the stable, and so elevated as to be near the floor and carry the diluted manure to every part of the cellar by means of a trough attached to the same. Every morning shovel the manure of the ten cows and oxen into the vat, and add just water enough to hold it in a state of solution, throwing the bedding and long manure of the young stock upon the heap below. Once a week put in your hog dung and night soil, with water enough to make the whole sufficiently thin to pour upon the heap below. Throw it over on stormy or other days, and add a new supply of material as often as needed. The amount of manure made in this way in a year, by housing your cows in summer, would be surprising.

This is the system that will redeem the soil of New England back to its primitive state of fertility.

LEWIS L. PIERCE.

East Jeffrey, N. H., Feb., 1858.

MANAGEMENT OF THE BARN.

Let the utmost neatness be observed in the management of the barn. No more hay or other fodder should be thrown on the floor at once than is requisite to supply one feed. By throwing large quantities from the mows or scaffoldings, there is an unavoidable loss from the drying of the fibre, which renders it less palatable to the animals, as well as less nutritious. Sweeping the floor daily promotes cleanliness, and conduces to the health and consequently the comfort of animals. The "tie-ups" and "stanchels," as well as the mangers, cribs, &c., should be daily cleaned out and frequently washed. An occasional whitewashing should be given to the ceilings and partitions; its sanatory effects are well-known, and of a nature too indisputably obvious to admit of doubt. Vermin rarely infest barns or animals treated in this way. The floors of all "tie-ups" should always be of stones—large flags—which can be thoroughly cleansed by the diffusion of water, and which do not become impregnated with the ammoniacal matter contained in the urine, and the fœtid animal matters of the excrement.

For the New England Farmer.

RECLAIMING LIGHT LANDS.

How can this best be done? There are hundreds of acres, all about, only used to hold creation together, that might be made beautiful and valuable, if we only knew how to do it. Some years since, Mr. Wm. Clark, of Northampton, Mass., said he had reclaimed such lands, and brought them to produce respectable crops. How this was done, I do not remember. But I presume you will, Mr. Editor, as it is your business to catch the manners living as they rise, and to bring to light what others may have forgotten. As you live in a region where the soil is light and sandy, if you will tell me how such a soil can economically be brought into a decent and productive condition, you will not only do me a favor, but also many other anxious

March 15, 1858. INQUIRERS.

REMARKS.—Certainly, Mr. "Inquirer," we can tell you how to reclaim such lands, even without carrying a load of manure upon them. But will you be patient, and follow the plan? and can you afford to wait for the result?

We will suppose that the land is sandy, or perhaps a sandy loam, that was once covered with pines which were cut off, and the land "ryed to death," and then pastured to death, which is full as bad as was the old Irish Judge, who sentenced a man to "be hung and pay forty shillings." Manure the land if you can, if not, plow with one horse, or two if you choose, but do not go down more than four inches, sow rye and harrow in. When the crop is ripe, thresh on the field, and keep what grain you can get as a *compensation for your labor!* Now take the rye straw, and let a man drop it before each furrow, and the plow follows immediately and covers it up.

Follow this course three years, and then sow with clover. Cut two crops of this, and the second year plow again and sow to rye, and if the operation has been well managed, you will probably get *twenty-five* bushels of rye per acre, and your land be in pretty good condition for any crop with common manuring. We can show you twenty-five acres that was almost *moving sand*, reclaimed in this way into fair and fertile fields. Are you encouraged?

We do not remember how Mr. Clark reclaimed, and have not the leisure at this time to look up his account of doing it.

HUMBOLDT ON "SYMMES' HOLE."

It has been computed at what depths liquid and even gaseous substances, from the pressure of their own superimposed strata, would attain a density exceeding that of platinum, or of iridium; and in order to bring the actual degree of ellipticity, which was known within very narrow limits, into harmony with the hypothesis of the infinite compressibility of matter, Leslie conceived the interior of the earth to be a hollow sphere, filled with "an imponderable fluid of enormous expansive force." Such rash and arbitrary conjectures have given rise, in wholly unscientific circles, to still more fantastic notions. The hollow sphere has been peopled with plants and animals, on which two small subterranean planets, Pluto and Proserpine, were supposed to shed a mild light. A constantly uniform temperature is supposed to prevail in these inner regions, and the air being rendered self-luminous by compression, might well render the planets of this lower world unnecessary. Near the North Pole, in 82 degree of latitude, an enormous opening is imagined, from which the polar light visible in Aurora streams forth, and by which a descent into the hollow sphere may be made. Sir Humphrey Davy and myself were repeatedly and publicly invited by Capt. Symmes to undertake this subterranean expedition; so powerful is the morbid inclination of men to fill unseen spaces with shapes of wonder, regardless of the counter-evidence of well-established facts, or universally recognized natural laws. Even the celebrated Halley, at the end of the 17th century, hollowed out the earth in his magnetic speculation; a freely rotating subterranean nucleus was supposed to occasion, by its varying positions, the diurnal and annual changes of the magnetic declination. It has been attempted, in our own day, in tedious earnest, to invest with a scientific garb that which in the pages of the ingenious Holberg was an amusing fiction.—*Humboldt's Cosmos.*

For the New England Farmer.

SHOEING HENS.

A friend of ours, boarding in the country, found his hostess one morning busily engaged in making numerous small woolen bags, of singular shape. Upon inquiry he was informed that they were shoes for hens, to prevent them from scratching. The lady stated that it had been her practice for years to shoe her hens, and so save her garden. These "shoes," (I believe they are not yet patented,) were of woolen, made somewhat of the shape of a fowl's foot, having an opening left sufficiently large to thrust in the foot with ease, after which it is closed with a needle and sewed tightly on, extending about an inch up the leg. Our friend observed that some of the biddies, possibly conceited with their new honors, appeared to tread as though walking on eggs—particularly was this the case when from the width of the shoe one would conceive that their toes might be a little pinched.

Thus, Mr. Editor, you see the progress of civilization; another class of bipeds has stepped into shoes! how far in the future pantalettes and bonnets lie hid let no scoffer dare say. "Puss in boots," as every one knows, was all a sham; but, for a certainty, biddy in shoes is no longer a fable. When snarling Diogenes hurried into the academy with "Plato's man," we all know what very naturally followed, for in his haste he had forgotten even to put his shoes on!

The original idea of this lady may be of value to those amateurs who desire at the same time a fancy garden and fancy fowls; for it is generally agreed that, baring their scratching propensities, fowls are of great advantage to grounds, from the immense quantity of vermin which they destroy. If, then, by this contrivance of bagging their toes, they can be prevented from scratching, we may thus secure, on a barn-yard scale, the political desideratum, the largest liberty compatible with the greatest safety.

Yours respectfully, J. J. H. GREGORY.
Marblehead, Mass.

For the New England Farmer.

SUGAR MAKING.

"SUGARING OFF."

Be sure first that your syrup is thoroughly settled, so that it is translucent and wholly free from impurities. If made too thick for this, it can be reduced with sap or water; but make no sugar from it, till you have given a fair chance for the fine particles of dirt that will unavoidably get in, to deposit themselves.

A pan is the best thing to sugar off with. For a batch of 100 or 120 pounds, use the front pan over the arch you boil sap in. A small pan, two feet square, and nine inches high, is very convenient for a batch of forty pounds, (or less) to be made into small cakes. This may be set in a temporary arch of brick, in your back kitchen, (if you have one with a fire-place and a wide hearth before it.) Now, if you have such syrup as you can easily make, and ought to make, boil it down; but save your eggs to go with your bacon, your skimmed milk for the pig, the saleratus for biscuit and batter-cakes, and your lime for mortar, but keep them all out of such syrup as *should* and can be made until late in the season. When the syrup is just commencing to boil, remove carefully all the skum, &c., which rises to the surface. If it will not stand fire well, and threatens to run over, a bit of fresh butter will at once cure it of this propensity, unless your sap was sour. You can use snow to tell when it is done; but it is best tried with a bow tied in the end of a green twig, or in a small wire with a handle of wood. Let this bow or ring be about three-fourths of an inch in diameter. When the syrup is sufficiently reduced for wet sugar, if this be dipped in, it will fill, and you can blow "feathers" from it, that will collapse as soon as formed. If they retain their shape, and will fly, or crumble when struck by the feathering stick, it is dry enough to be made into small cakes that will not drain at all. A little practice is needful to determine when it is in just the right condition; and regard must be had, too, to the temperature and dryness of the air in which you blow these sugar-feathers. When done to suit you, lift off the fire, and turn it into a brass or copper kettle. Stir it briskly until it granulates sufficiently, but be careful not to wait too long, if you wish to put it into small moulds. This requires rapid and skilful fingers.

The longer and more vigorously you stir it, however, the whiter your cakes will be. Prepare your moulds before you remove the sugar from the fire, by applying fresh cream to them with a small brush. Be sure that the cream is always sweet.

THE SETTLINGS AND SKIMMINGS

are all to be saved in a tub by themselves, regard being had to the quality of the syrup from which they were taken. The settlings at the bottom of several tubs may be poured together, slightly reduced with sap, and in a day or two the pure sweet may be poured off. After making 1000 pounds, I have had the "settlings" all contained in a four gallon tub, and the "skimmings" in a two quart basin. The best way to deal with these is to take six or eight gallons of them, turn them into a barrel of sap, (in a half hogshead tub, or something similar,) stir them up thoroughly; then throw about four quarts of dry plaster of Paris upon the surface, and leave it to settle. The pulverized gypsum in its slow descent will precipitate with itself the lighter minute impurities that float in the sap. At the proper time dip or turn this off, and call these settlings finished. This will make a sugar of second quality.

PAILS FOR GATHERING.

Let these be made of tin, smaller at top than bottom, with a half inch rim on the bottom to prevent their sliding. On the one side should be a tip like that upon a gallon measure, and a handle upon the other to turn them with. Those for a man should hold about fourteen quarts, for boys, seven to ten quarts. Such pails will not become heavy by water-soaking.

Sap at a distance from your arch is most easily gathered with the help of horse or oxen. If you use an open cask, it should be largest at the bottom. I think barrels preferable, since you can easily unload them into your storage tub. A large cask is not so easily managed, unless you *dip* the sap, or a part of it; and this cannot well be done without waste. The barrels should be carried on a rack purposely made for them. Your large tubs can easily be so arranged, that the sap will run from them directly into the boilers, if you choose it.

STOPPING UP THE TREES.

When you gather your tubs at the close of the season, it will be a good thing if you will stop up the holes, at least in your young trees, with closely fitting pine plugs. Make them an inch long, and every one of exactly the right size. To secure in all of them a perfect fit, bore two or three holes in a hickory stick, or bit of plank, with the same bit you use to tap your trees, and make all the plugs pass through these, seeing to it that they touch at every point. The boys can easily make as many of these as you will need, on stormy days, or in the evenings. It is no long job, if the boys have sharp knives and free pine. You will saw them off a little obliquely, since you did not tap the trees with a perpendicular bore; and in stopping up the holes, you will take care to drive them *just inside the bark*, so that they will fit smoothly with the outer wood. These will keep out the water and the air, and cause the tree to heal sooner, and with a less scar, than when left as they usually are.

Some like to tell great stories. I can easily show that sugar-making is profitable, though many think it is not. I have to boil with three fires, on account of my trees being so widely scattered; but one little place of 140 trees of second growth, all upon an acre and a half of land, is tended by a lad of thirteen years. He gathers by hand, and boils the sap for fifty pounds per day, and often more, with time to spare for reading the newspapers. This he does in two copper pans, each three feet square, upon an ox-bow arch like that described in number one.

ELIJAH H. GOODRICH.

Hinsdale, Mass., March, 1858.

For the New England Farmer.

CONTRIBUTIONS BY THE STATE TO COUNTY SOCIETIES.

It is now about forty years since organizations of this kind were first instituted. Then they were thought so desirable that an offer was made of *twenty-five per cent. annually* on such fund as should be raised, not exceeding $3000. In this way $600 a year has accrued to each county society; and in several of the counties two, three and even four societies have been established; so that like territory and like population, in some sections, draws four times as much money from the treasury of the State as in others. Instance, while Essex draws only $600, Worcester draws $2400. This is unequal and unjust, and if not remedied will be a growing cause of dissatisfaction. Sooner than have such inequalities remain, I would leave the societies to their own resources for support, and am by no means sure that they are not quite as able to go alone as the State is to lead them. I would not say anything rashly, to the prejudice of any existing society, nor would I wish the State to become bankrupt in support of any particular class of citizens, even though they were more to be relied on, in time of need, than any other, as I think the farmers are.

ESSEX.

March 18, 1858.

"WILL ROOTS PAY?"

I see that two of your correspondents have opened quite strongly on the negative of this question. I take the affirmative—at least, till our markets are better supplied than at present.

Root culture, like fruit culture, does not keep pace with the demand—so roots bring in market much more than it costs to raise them—and, perhaps much more than they are worth to feed to stock, unless it be, as one of the gentlemen on the negative has suggested, "*for medicine!*"

On the basis of nutritive value assumed by "P.," carrots would be more profitable to raise in this region, than corn. We can raise enough more than ten times the quantity, to pay for the extra labor required for the carrots.

But a writer in a recent *Rural*, in trying to show that *potatoes* are a more profitable crop than *wheat*, ranks the nutritive value of the tuber nearly equal to the grain. Now, I believe *carrots* will as nearly equal *corn*, as *potatoes* will *wheat*, in the comparative value of food for man or beast.

One farmer in our town has taken carrots from my premises before they were housed, at

twenty-three cents per bushel, when corn was worth seventy-five, and good hay could be bought at seven dollars per ton, (sixty pounds for twenty cents,) to feed his stock with. Another brought me corn, in the ear, in the spring, and took carrots, bushel for bushel, to feed his horses.

I can pay interest on land and taxes, within the corporation of Attica village, and raise carrots for ten cents per bushel, one season with another. On cheaper land, exempt from corporation taxes, I think farmers generally can produce them for from four to eight cents, and pay all charges.

"P." finds trouble in keeping them. Build, in the cellar of the barn, cribs, such as you would use for corn, and I think they will keep well. A slight freeze will not hurt them. A little sand scattered in among them, will tend to keep them fresh.

I have spoken only of carrots, as this root is at once the best, the surest and the most prolific crop. But to supply our city and village markets, every kind of edible "root" will pay well, as those who try it will know.

As to the "medicine" for stock, I like the idea —but have no fear of its bad effects in Allopathic doses. My cow is not harmed by a half bushel a day. It *"doeth good, like a medicine,"* as Solomon says of a merry heart, and as I think all "medicines," we take, should do.—*Rural New-Yorker.*

For the New England Farmer.

WOODLAND.

There seems to be a growing conviction in the minds of intelligent observers that too much land has been "cleared up," in our vicinity at least. Large tracts of "plain" land are often seen by the traveller, which hardly pay for fencing. Grass grows sparingly on such lands through the moist weather of June, but the hot summer months dry up the half-covered soil so thoroughly that vegetation nearly ceases.

Having spent much time the past month in the "woods," my attention has been directed to the comparative value of woodland over other open fields similarly situated.

In the first place the *climate* of the forest is more favorable to vegetable growth. In winter the ground freezes to a less depth than in pasture land. There is always more or less rubbish on the surface—brush, twigs and leaves, which protect tender roots from injurious freezing. Moisture and heat are indispensable conditions for rapid growth. Every one has observed how much faster the grass gains when it has become high enough to remain damp till mid-day. Now in the woods there is sufficient heat for the growth of trees in summer, and the ground in the shade of the thick branches, covered with decaying vegetable mould, is in the best possible condition.

The effects of boisterous winds are much less unfavorable on forest lands than on open fields. Storms of rain and driving showers are broken by groves of trees, and the needed moisture drops softly down upon the spongy earth.

In the mysterious operations of nature the atmosphere receives from the earth invisible gases, which can only be arrested, fixed and returned to the earth, through vegetable forms.

Now every leaf is a lung, whose principal office is to breathe the passing air, and transform, by its wonderfully delicate functions, the wandering atoms into solid oak. The grass, the grain, spread their network but a few feet upwards. But through what a space do the forest giants fling their broad arms!

The demand for wood and timber will probably continually increase until the price reaches that of European countries. In Paris wood is sold in small packages by weight. In Iceland no fuel is used except for cooking. In Buenos Ayres wood is so scarce that the common peach tree is cultivated for fuel. Immense fields are planted, and cut down when of sufficient size.

But how different the practice in New England. A piece of woodland is cut over. The following summer it is burned. Now in burning there is always a great waste. The light, combustible matter, which if let alone would gradually decay and become wood again, is consumed; and the ground retains a slight covering of ashes, instead of a heavy mulching. The land is plowed with a "breaking up" team, which proves no joke to him at the handles. Rye is sown, which grows, generally, luxuriantly, stimulated by the ashes. As the thrifty sprouts come up they are faithfully grubbed down, until discouraged. Oftentimes a second crop of rye is sown, which comes up sparingly. Finally this beautiful piece of woodland becomes the "old field," or "the plain," ornamented with mullens and protected by blackberry vines!

The fact seems too often lost sight of, that, when the young trees of a forest are cut off with the large, (as they always should be, that no bruised or broken sapling remain,) the sprouts which spring up are always unusually thrifty. They shoot up in a few years straight and promising. Now is there not a great waste in destroying such roots, so full of vitality, all alive and planted?

The sad mistake of killing the goose that lay the golden eggs is often made by the owners of woodland. Rocky hillsides, only accessible in deep snows, are often brought into grass by great labor. And "pine plains," where nothing but pines are profitable, are cleared of these.

The fact is, a tree is not looked upon in its true light. Dr. Holmes speaks of the lofty elms as "nature's flagstaffs." He is to be pitied who looks with no feelings of admiration upon a beautiful grove. Who can pass the attractive residence of our distinguished townsman, R. W. Emerson, without acknowledging the marvellous beauty of trees skilfully planted? But this is a digression. I wish to speak of trees only as a source of gain.

I know that there are hundreds of acres of poor pasture, now of trifling profit to the owner, which were better in woodland. Just think, a piece of woods takes care of itself. There is no building of fence, or particular risk about the property.

To derive the greatest profit from any land, it is necessary to have a good deal growing on it. The gardener plants potatoes between his rows of peas, so that when the peas are out of the way the land may be still occupied. So turnips are sown among corn on stony land, and gain prodigiously after the frost has killed the corn.

Now I would leave all the land to woods not convenient to till, or fertile enough to yield good pasturage. By so doing a great addition would be made to the wealth to be enjoyed by the next generation.

There can never be another period while man exists upon the earth when coal-fields and peat bogs will be formed by a luxuriant vegetation. It is but a needed economy to save the woods, and allow as many trees as possible to grow for the future. W. D. B.

Concord, Mass., March, 1858.

For the New England Farmer.

EXPERIMENTS WITH PEAS.

MR. EDITOR:—Last spring I received from a friend the following new varieties of peas—a description of which I send you, together with samples of the same.

Daniel O'Leary.—Planted May 10th. First mess gathered July 13th. It does not seem to be a good bearer.

Harrison's Climax.—Planted May 12th. First mess gathered July 22d. Very productive and delicious, and bids fair to become a valuable variety. Wrinkled and much resembling in appearance the Champion of England. Height 2½ feet.

Harrison's Alliance.—This, with the one above and two following, were planted at the same time. First mess gathered July 20th. It is a wrinkled variety of a straw color, fine quality and nearly equal to the Climax. Height 2½ feet.

Harrison's Perfection.—First mess gathered July 20th. A very good pea, and like the others, great bearers—one vine producing seventeen cods. Partially wrinkled and of a straw color. Height 2½ feet.

Harrison's Glory.—A green variety, partially wrinkled, of splendid foliage, good quality and much promise. First mess gathered July 22d. Height 2½ feet.

Dwarf Green Mammoth.—Planted April 29th. First mees gathered July 30th. It does not seem suited to our climate. Many of the cods were imperfectly formed, and in most instances contained but three or four peas in each. The expectation which we had formed of it was far from being realized. Height 2½ to 3 feet.

Waite's King of the Marrows.—This is a pea of high character, but its growth has been so wild and luxuriant that we have not been able to fix its period of maturity. Two feet and a half we were told was its usual height—but in our grounds some of the vines measured nine feet and a half. One of the largest and finest peas.

Of all the European varieties which we have ever tested, none (everything considered) seem so well adapted to our climate as the Champion of England. It often fails, however, in very dry locations. Rich, moist land is its delight, and on such only can it be grown in its greatest perfection. A decided advantage is gained we think by sticking peas. They continue longer, are sweeter, more prolific and less liable to mildew than those suffered to lay on the ground. From July 10th to Oct. 20th, we were by successive planting enabled to pick a mess of peas every day. Yours truly, ANDREW LACKEY.

For the New England Farmer.

FLAX—POTATOES AND PEAS.

MR. BROWN:—Last summer I accidentally met Mr. John Boyle, who is mentioned below in an editorial notice from the *Mercantile Journal* of Jan. 5th, 1858, published at Belfast, in Ireland.

Mr. Boyle is a very intelligent man, of Irish birth, now residing at Leeds, in England, where he is employed by a company to introduce the culture of flax. He and I had "walks and talks" together through old Ireland, and I have recently received from him a letter making inquiries about the flax culture in this country, and the prospect of success if he should come here. We cultivate very little flax hereabouts, and if you or any reader of the *Farmer* can give any information on the subject, I should like to see it published. Mr. Boyle also sent me the paper from which I cut the following, worth noticing for the singularity of the leading thought, if nothing more.

H. F. FRENCH.

Exeter, N. H., Feb. 15, 1858.

THE POTATO DISEASE.

We publish in our seventh page a very important letter, addressed to the editors of the *Leeds Mercury*, pointing out an easy, and, as the writer reports, effectual remedy for this destructive malady. Our attention was drawn to this letter by Mr. John Boyle, of Leeds, who knows Mr. Jackson well, and has every confidence in his report. We strongly recommend our agricultural friends to try Mr. Jackson's plan next spring, as we have no doubt of it leading to satisfactory results.

REMEDY FOR THE POTATO DISEASE.

To the Editors of the Leeds Mercury:

GENTLEMEN:—In your supplement of the 28th November last, you have an extract from a letter in the *Agricultural Gazette*, respecting the insertion of peas into potato sets, with a view to counteract the disease which is and has been so very prevalent in the growing of that very important root. Eleven years ago, when that disease had made its appearance, and was exciting a great deal of consternation in the minds of both potato growers and consumers, I made the same experiment. I do not lay any claim to originality. I believe it emanated with an English farmer in Belgium, and was the result of the merest accident. Some idle boys in his field, who ought to have been setting potatoes, amused themselves by thrusting hard peas which they had in their pockets into the sets without the farmer's knowledge, and planted them in that state. The farmer's attention was directed to the fact by his immense yield of the peas, growing in connection with his potatoes, and his astonishment was still greater when, on taking up his crop, these were all sound and free from disease, while he was suffering very much in other parts of the field. By making inquiries amongst his servants, he discovered how the circumstance had arisen, and communicated the whole facts to the English newspapers. Mr. Joseph Bower, chemist, of Hunslet,

had read the account in the papers, and informed me of it. For some time before I had paid a good deal of attention to the subject of the potato disease, but my inquiries had certainly not gone in that direction. Immediately, however, I set to work, to endeavor to find a solution to the new problem. I submitted many samples of diseased potatoes and of sound potatoes to careful chemical analysis, and I invariably found that the diseased potatoes, as compared with the healthy ones, exhibited a marked deficiency of nitrogen and of nitrogenised matter in every instance, and also a great deficiency as compared with the published analysis of the potato, by Liebig and others, made some years before. From that result, then, I inferred that the potato was set inherently deficient in nitrogen, being inoculated with a substance intrinsically rich in that element, as peas are during the mutual decomposition and chemical change of the two substances in the process of their germination and growth, sufficient evolution of nitrogen from the pea would take place, and being absorbed by combining with and supplying the deficiency of that element in the potato, communicating, as it were, its equivalent in that way, would counteract its tendency to disease. I then tried the experiment practically. I obtained potatoes of several kinds for sets whole; I then took peas (Bishop's dwarfs,) and inserted four or five (according to the size of the potato,) deep in the fleshy part of the set, taking care to avoid the eyes. I then planted them in my garden at Hunslet, in the usual way. Mr. Bower, and several other gentlemen at Hunslet, will well recollect watching with great interest the growth and development of the compound crop. The result was perfect success. I had a very extraordinary yield of peas. When the potatoes were taken up, they were a large yield, with a very few small ones, and every potato was healthy and free from every trace of disease. Those potatoes were laid on a wooden floor in a room in my dyehouse, where they remained all winter until the following spring; they were then examined, and found to be all sound and healthy, and were employed as sets again in the same way, with the same result. I am, &c.,

JOHN JACKSON.

Knostroplane Bank, Leeds, Dec. 1, 1857.

AMERICAN POMOLOGICAL SOCIETY.

We learn that the *Seventh Session of the American Pomological Society* will be held in the city of New York, and that Tuesday, the 14th of September next, has been fixed by the President, Hon. MARSHALL P. WILDER, as the day for its commencement. This society has already done much good in fixing the nomenclature of fruits, in promoting the growth of those that are worthy of cultivation, and in rejecting those that are worthless. Through its agency, the individual farmer may save the trouble, cost and vexation of testing fruits for himself, which others have tested and found good for nothing. Circulars will undoubtedly be issued in due time, giving particulars of the intended gathering.

For the New England Farmer.

QUINCE ON PASTURE LAND—ELMS—BLUEBERRIES.

MR. BROWN:—Am I right in the opinion that the culture of the *Quince* may be as profitable, and even more so, than that of the apple? (1.) I know some quince bushes that have been sadly neglected, yet have borne very fair crops in the two last years, while apples in this vicinity have been very scarce. I know the quince bush is a favorite of the borer, but is the fruit as liable to be attacked by the curculio as is the apple? The latter is ruinous to the apple crop here, and, of the two, seems to be a hundred times the worse.

To fit a piece of pasture, never yet cultivated, for a quince orchard, would the plowing in of green crops and subsoiling three or four years be a sufficient preparation without any other manure? (2.)

Two years ago (like a dunce, and with plenty of company, too,) I transplanted some large elm trees, thinking to gain some years over small ones in size. The tops I cut off to match the roots unavoidably lost, and as these stumps were not covered in any way, they are now rotting. Will not this cause a lasting defect in the trees, by the rot continuing down? (3.) If one is planting shade trees for beauty, should they not be as particular in the choice of handsome and thrifty trees as in the selection of fruit trees? (4.) For myself I would rather see a naked door-yard and road-side than a homely tree. My observations, in the two years since I set my trees, have led me to think that it will be a lasting source of regret to me if I do not pull up my trees without delay, and plant good ones. You must have noticed this defect: and now your opinion, if you please.

Can the common blueberry be much improved in size by cultivation? Or can a superior fruit be raised only by seedlings? (5.)

BENJ. CHASE, JR.

Manchester, N. H., March, 1858.

REMARKS—(1.) Where there is a demand for the Quince, at a fair price, we have no doubt it might be cultivated, even with more profit than the apple affords. Quinces, however, are used only in quite limited quantities, and the supply may easily be carried beyond the demand.

(2.) The preparation of pasture land for the quince as you suggest would be sufficient for a time—but as the trees or bushes should increase, spread their roots and produce fruit, they would need dressing.

(3.) If the elms you speak of should grow rapidly, the wound made might be covered with a new growth, but a defect would always remain, and one which might prove ruinous to the tree after it had attained considerable size and assumed a beautiful form.

(4.) Certainly. It costs no more to take up and transplant a handsome tree than it does a deformed one. If we have committed an error, the sooner it is corrected the better; we believe that rule holds good in physics as well as in ethics.

(5.) Cannot tell you. The common high blackberry may be greatly improved by garden cultivation; that is, improved in size, but not in flavor. May not the blueberry as well? Try it, will you?

For the New England Farmer.

WHAT CAN WIVES AND DAUGHTERS DO FOR AGRICULTURE?

BY SUSIE SUMMERFIELD.

"Nothing towards helping us, while they lavishly spend our hard earnings," exclaims an aged farmer by some cozy fireside, with his weekly paper in his hand. "Ha! ha! *women* help us farmers greatly, with their high notions, with their imported fabrics and dainty airs! Humph! they only burden us with expense, knock us with their elbows, crowd us with their hoops, and disdain us in their pride, now-a-days; but, in my youthful days, a woman proved herself a genuine help-meet, and not a help-eat. Then, wives and daughters were like stars in our homes, and made hearts vibrate with delight by their cheerful smiles, soul-meaning sympathy and earnest labor. Eh! time and again, I'm forced to say, 'O, would I were a boy again,' that times were now as of old, when our women were to us, what roses are to the garden; shedding joy in rich profusion. Say, Charley, don't *you get married*, till you find a lady *worthy* of the title, a New England daughter."

Thus does a wise old farmer cogitate and advise in his easy-chair, over his paper. But spare your sarcasm and judgment against us for a moment, dear sir, while Susie chats with thee, and attempts to prove that woman in this age, can be just as wise, useful and truly estimable as in the days of our grandmothers. Though the spinning-wheel and shuttle have given place to the factory and steam-power, and invention has lightened labors of all kinds, yet our sex have a mighty power to exercise, even in the art of agriculture.

When the Creator had made Eden, with its purple clusters, and luscious fruits, and dewy flowers, when he had made man to cultivate, govern and enjoy it, he then made woman as a boon as Heaven's best gift. She has proved herself to be such, in different ages, and in diversified spheres.

While our forefathers made heavy strokes towards civilization, our primitive mothers acted well their parts, in humility and sweet confidence. In times of contest and privation, womanly counsel and her constancy shone conspicuously in every-day scenes, and accomplished noble deeds.

On missionary grounds she has proved herself competent for arduous labor, and granted cheerful aid in irksome tasks. In modern times, the walks of literature have been traversed, yea, adorned by women of refined sensibilities and great mental endowments. Even our own age has been memorialized by heroic deeds of love and charity, from a Florence Nightengale and Grace Darling.

But you, Sir Farmer, exclaim, "what has all this to do with us and our occupation?"

It proves her potency and ability. Now we wish her to *realize* that she possesses such merits, and *to feel as if she had something to do in our era;* something to effect, not only in the refinements of elegant society, but something to do in behalf of agriculture, and then this truly noble and compensating occupation will become elevated accordingly as it deserves. *She must believe that her Creator has given her a mental capacity and a physical organization to be kept in healthful condition by use.* Then, she must have a right estimation of life, of the demands of society, and of true merit, wherever it is found.

If our New England ladies would but place a proper estimate upon our farmers and farming, which actually is the stay and staff of our land, then society in general would properly estimate and respect it.

Agriculture invites investigation into the most intricate labyrinths of nature, and what woman can meet with injury by coming in contact with the simple, yet wonderful beauty of the natural world? If a husband or son labors in the harvest field or verdant meadow, to supply his family with their daily food, with nought but the echoes, whispering breezes, or breathing murmurs from nature's unseen choir to molest him; or whether he toils upon the mountain's brow, in the solemn silence of dense forests, or amidst waves of gold, where the ripened grain bends in seeming adoration to the god of plenty, he meets with nought in his submissive toil which should deteriorate him one iota, in the estimation of the gentler sex.

The farmer at the plow, with his striped frock, engaged in honest toil, is as worthy of a smiling recognition, as is his wife in her flounced silks upon the fashionable promenade. The farmer's son, whose imbrowned brow is damp with the sweat of labor, is as worthy of admiration, as is the farmer's daughter at the boarding-school, with dewy lips, and rose-tinted fingers.

Futurity will prove the necessity of more extensive agriculture in our country, as extent of territory and her population increases. During the recent convulsion in our financial and commercial affairs, the permanency and lucrativeness of farming remained stable; and now is the time for woman to show that she has a right appreciation of this worthy occupation, by encouraging those of the other sex to engage in it.

American agriculture has much to accomplish ere it becomes perfected, and American ladies should be proud to act well their part in its progression. It is just as meritorious in a young or elderly lady to manifest an interest in the progression of the science of agriculture, as to be interested in the literature of the day.

It is natural that man should love womanly sympathy and encouragement, in whatever sphere of life he moves; and are not our hardy, strong-minded yeomen, as worthy of approbation from our sex, as are financiers in the commercial world, or clerks in the counting-room, or shallow-pated fops, that have not one-half of the intellectual or moral worth about them, as has the most brawny greenhorn in christendom?

I once read of some fashionable exquisites at Saratoga becoming shocked because they chanced to sit at the table with an intelligent farmer and his family, *"for it was so vulgar to eat with farmers!"* We hardly believe they had as correct ideas as the spirits who communicated to a medi-

um, *"that Webster was apt to make mistakes in his politics and his dictionary too!"*

A worthy young man once remarked to me, "that he would stay on the farm if the young ladies did not turn up their noses to farmers." Young ladies, you must see to it that this error be corrected in your circles. Farmers usually provide the best of homes, and make the best of husbands. Now young farmers must advocate improvement in agriculture, elevation in mind, refinement in manners, and young ladies should advocate them too. God never designed woman as a mere toy, to be stowed away in palaces. Farmers have few palaces, and need no lisping fashionable belle to preside at their hearth-stone. They need assistance from vigorous minds and willing hands, while the natural vivacity of womanly hearts should be their sun-light, which shall shed a cheerful glow, and even penetrate the depths of manly souls, coax tired laborers and anxious business men to relaxation and innocent pleasure. When our young ladies are educated to become efficient co-workers with the other sex, a new feature in society will be developed, while woman will endear herself by her graceful virtues to man, and prove his guiding star through the myths and mirage of life's weary pilgrimage. When we find feminine talent and sympathy directed into a right channel, we may then expect that the intellectual, moral and physical being of future generations will become elevated, and truth more often triumphing over error.

It is no ignominious thing to our farmers' wives and daughters, that they understand the distinction between a superior and inferior breed of animals, which exists in the farmer's herd or flock. It is as praiseworthy for a young Miss to knit a sock, produce golden lumps of butter or a tempting cheese, or loaves of bread of feathery lightness, as it is to trace fairy flowers and forms upon the canvass with the needle and crewel; or upon bristol-board with the paint-brush, or to touch the ivory keys of the piano. It is as graceful in the young maiden to dance over the newly mown meadow, while she administers to the wants of the heated and thirsty laborer swinging his scythe, as it is for her to "tread the light fantastic toe" in a dizzy whirl in the fashionable ball-room.

A complaint is made that our young men emigrate to the West, but we have ladies enough to stop them, if they will *try for it.* Ladies must not treat farmers as drudges. They must talk with them, calculate with them in their estimation of loss and profit. Must admire with them their broad, well-tilled acres; their sleek oxen, fine horses; laugh with them beneath the droppings of the thrifty vine or fruit tree of their own planting; sympathize with them in their cares, soothe them in their weariness; and then, we will answer for it, that the wise old farmer will cease to expatiate upon the merits of the women of his youthful days, and his son "Charlie" will be glad to catch one for a wife, while New England daughters of the present age shall redeem New England feminine character!

FRANKLIN COUNTY AGRICULTURAL SOCIETY.—By the considerate attention of JAMES S. GRENNELL, Esq., of Greenfield, and Secretary of the Society, we have before us its *Eighth Annual Report.* Coming through the hands of Mr. Grennell, of course it is made up with care, and presents a handsome appearance; and this, with its papers on various topics, will reflect permanent credit and character on the association. The report of the committee on "Improving Pasture Lands," "on Subsoiling," on "Improved Meadow and Swamp Land," on "Fruit Trees," "Manures," "Grain and Root Crops," and several on "Stock," contain valuable information and suggestions, and are worthy of frequent reference. The officers of the society for 1858 are:

Z. S. RAYMOND, of Greenfield, *President.*
T. M. STOUGHTON, Gill, } *Vice Presidents.*
MOSES STEBBINS, So. Deerfield, }
JAMES S. GRENNELL, of Greenfield, *Sec. and Treas.*

THE FLOWERS.

The ancients early remarked that different trees—especially different date trees—produced differently developed flowers. The discrepancy consisted simply in the flowers of one tree being provided with several minute organs, to which botanists apply the term *"pistils."* These trees were, they remarked, invariably destitute of fruit, unless growing in the immediate vicinity of trees differently constituted, and which produces flowers differently constructed, and containing in their central organization certain members to which is applied the technical name *"stamens."*

The celebrated naturalist, LINNÆUS, has arranged the whole vegetable kingdom into twenty-four classes—each class being distinguished by the number of the generic or sexual organs found in each flower. His system is admirably adapted to assist the memory, and at the same time denotes with accuracy and clearness the analogies of all plants. Philosophers, in every age have indulged in many singular fancies regarding flowers, and their uses and modes of contributing to the economy of vegetable reproduction.

Dr. DARWIN, himself a true poet, delighted to contemplate flowers—not in the light and character of mere organized but insentient beings, but as possessing a sentient principle, not less real or identifying in its character than the mysterious but strongly distinguishing faculty of instinct in the human soul. Hence his beautiful theory of the *"Loves of the Plants"*—a theory which could have been suggested only to a mind endued with the richest elements of poesy, and vividly alive to that peculiar species of inspiration which the most hidden and recondite recesses of nature can alone afford. It is much to be regretted that botany has not been more extensively introduced into our common schools. In it the young would find a powerful induce-

ment to more extended researches, and the early formation of habits of perseverance and industry —qualities always to be appreciated in youth, and which it is not always easy to form, without the assistance of some powerfully attractive and engrossing study, which unites the rewards of pleasure with the labor of pursuit.

Flowers indicate taste, sentiment, character; they have a charming influence on young persons, as those who are reared in their midst and who engage in their cultivation, are quite likely to be truthful, gentle and sincere.

See in what glowing numbers Dr. DARWIN wrote upon his favorite topic, *the Flowers*. How closely he must have observed them, and what joy his rambles among the flowers of the fields, and that minute observation, must have afforded him.

"But thou whose mind the soul-attempered ray
Of taste and virtue lights with purer day;
Whose finer sense with soft vibration owns
With sweet responsive sympathy of tones;
So the fair flower expands its lucid form
To meet the sun, and shuts it to the storm;
For thee my borders nurse the fragrant wreath,
My fountains murmur, and my zephyrs breathe;
Slow slides the painted snail, the gilded fly
Smooths his fine down, to charm thy curious eye;
On twinkling fins my pearly pinions play,
Or win with sinuous train their trackless way;
My plumy pairs in gay embroidery dressed,
Form with ingenious bill the pencile nest,
To love's sweet notes attune the listening dell,
And echo sounds her soft symphonious shell."

For the New England Farmer.

HARD TIMES.

"Hard times"—nothing has been heard scarcely for the past six months but "hard times"—and to many, the expression has a feeling meaning to it; but to you, brother farmers, what care you for hard times, so far as all the essentials of a good living are concerned? There may be a "panic" among money-lenders, note-shavers, &c.; there may be a "crisis" among traders, merchants and manufacturers; but if you are a farmer, such as I often picture to myself, and such an one as I have seen in my day, you will care for "none of these things," any further than your sympathies are called forth by the wants, misfortunes and sufferings of your fellow-men. Yours is a calling instituted by the Great Former of all things, and you have only to obey the laws which He has given you, and the "profits" are seen; there can be no mistake here. Truly, there is no calling, no speculation, no venture, no splendid operation that can compare with yours; the croaking and preaching of the idle and lazy to the contrary, notwithstanding. Hard and severe toil may be yours, but do they not bring sound health and a good digestion? By some ignorant and foolish-minded persons, your business, I know, is called low and vulgar—but I tell you, it is the business of Heaven; it brings you in direct communion with "nature and nature's God," and there can be nothing low or vulgar in this.

Shame on the stupids that know no better, and can see nothing beautiful, and to admire, in the occupations of the farmer. Such a soul must have a body more simple than the zoophite, and it would need no miscroscope to show the structure of such persons. Heed them not, but go forward and upward in your nobler and more elevating work, remembering that the promise of seed-time and harvest is yours, the beauty and sublimity of nature are yours, health, and, I hope, contentment are yours, the noblest of all that constitutes manhood are yours; and if the blessings, opportunities and privileges of life which God has given you are rightly improved, when you are called to the judgment to render your account of life's farming, an eternity of happiness is yours. All honor, then, to the worthy, independent farmer! NORFOLK.

King Oak Hill, 1858.

WAIFS FROM OVER THE WATERS.

SANDWICH ISLANDS—SUGAR CANE—APPLES—BANANAS—SWEET POTATOES.

We have been favored by the Rev. R. W. FULLER, of Lempster, N. H., with the following extracts of a letter from that far distant and interesting group, the Sandwich Islands.

In a line from your office, received last July, a desire was expressed for information concerning the fate of the *China sugar cane seed*, which I ordered for my brother, Josiah Fuller, at Honolulu, Sandwich Islands; and "the results of the experiments" with it there. My brother informed me that "the seed came safely to hand, in good order, with the pamphlet," &c. In regard to the production he writes,—"We look with much contempt upon the grass as a sugar-producing plant, in this country, where the real sugar cane produces three tons of sugar to the acre. But it is undoubtedly of the greatest value as fodder for animals. I have a small patch in my garden, from which I feed my cow. In three days after I began to give her about 25 pounds of the suckers, she increased her milk more than a quart a day.".

The following brief extract from one of his letters, concerning the productions and fertility of those islands, may not be uninteresting to the readers of the *Farmer*. At the time this was written he had recently purchased and taken possession of a pleasant residence in a valley about two miles from the city, for the health of his family.

"We enjoy our valley residence very much,—have fruit and vegetables of our own,—have not been obliged to buy any vegetables except Irish potatoes for months. Had two apples on one of our little trees. One came to perfection and was a delicious fruit; the other was blown off by the wind, before it ripened. I mention this because it is something remarkable here. One of my bananas, only seven months from planting, has a large bunch of 100 bananas upon it and is a magnificent plant, about 12 feet high. The fruit will be ripe in a month. I have about 200 plants growing. There is no check to the growth of our plants, except the dry weather which we sometimes experience.

My sweet potato patch—one-fifth of an acre—produced about 60 barrels of potatoes. We have

been supplied for the last four months, and supplied several families, and sent 4000 pounds to San Francisco market. The second crop will be nearly as large. We do not pull up the vines, but take out the full sized potatoes and cover the roots. The potatoes keep growing, and in good soil, produce crop after crop to one planting. We can keep constantly digging for our own use from the time the potatoes are first ripe, (four or five months from planting) through the year. *One of my potatoes weighed eleven and one-half pounds!* Would be glad could I send you a bag *by telegraph.*" R. W. F.

For the New England Farmer.

STEAM PLOWS.—[CONTINUED.]

BY H. F. FRENCH.

BOYDELL'S PATENT TRACTION ENGINE.

This engine, as exhibited at Salisbury, was operated to draw six plows, opening six furrows at one passage across the field. It is distinguished from the other steam plows that have been mentioned by being worked by a locomotive instead of a stationary engine, which walks over the earth like some huge animal, puffing, and snorting, and taking along its six plows, with no apparent consciousness of effort. It possesses another peculiarity—that of laying down an endless railway track for its wheels to run upon, and taking it up as it proceeds. Attached to the wheels of the engine are large, flat blocks, six to each wheel, like rackets on a horse, to keep him from sinking in soft ground, which are laid down in turn by the wheel in its revolution, and on which the iron rim of the wheel runs. This engine walks about in a very intelligent sort of way, comes on to the field from a common road, drawing its tender with coal and water, and even carries the extra clothing and dinner of the laborers. It turns readily at the end of the furrow, stalks off to its water-tank when it is thirsty, and helps itself to water, and when it is hungry or fatigued goes for its own coal for refreshment. It is claimed that the same engine can draw your timber to market or the mill, upon common roads, haul in your hay and grain, work your threshing machine, and in short do most of the work of the farm instead of horses. This machine was not, at Salisbury, doing so good plowing as Fowler's, but the quality of the work is not, at present, of much importance. It is not a question of mere plowing, it is a question as to the best mode of applying the power of the steam engine, whether as a stationary or locomotive engine; for it is obvious enough that when we have once found a convenient and economical power, plows, harrows, digging machines, or anything else may be worked by it. Boydell's engine is guided by a driver, who sits on the forward part, while the engineer rides like a footman behind. Three double plows were at Salisbury attached to it by chains, and these were held by three men, who walked, following and holding the plows in the usual manner. Many of the objections to the stationary engine are obviated by this invention. No horses are required to move it from place to place, or to draw its supply of fuel and water. The cumbrous "anchor," with the long ropes, used by Fowler, are here dispensed with, and if the adjustment of the plows as used by Fowler is found most convenient, there is nothing to prevent its adoption, and the drawing of his plows, with this locomotive engine. The following extract from *The Railway Record* of June 20, 1857, may be interesting, as showing the practical working of this engine, and the probability of its application to agricultural uses:

"We publish to-day the journal of the trial of Mr. Boydell's Traction Engine, on its endless railway, from Thetford in Norfolk to London, a distance of about eighty-five miles, with a train of carriages, containing about seventeen tons of goods, which it brought up, upon the ordinary road, at the rate of three and a half miles per hour. The train was ninety-five feet in length, and the engine twenty-seven, and the gradual ascent in many parts was one in fifteen, and at various points the road was newly laid with rough flint and gravel. We are so satisfied that it is only necessary for the actual performances of this engine to be generally known to lead to its adoption in localities where the cost of constructing a level locomotive line would be too great, that we especially desire that the "journal of the trial between Thetford and London" should be carefully read by all practical men. Hitherto the traction engine has been better known in connection with the agricultural interest, but here we have its application to the traction of merchandise on common roads."

All the steam plows that have thus far been described, are constructed upon the idea that the old principle of the plow which shall turn a furrow of a few inches, subverting the soil, and preparing it for more perfect tillage by means of harrows and the like, should be employed. Yet everybody admits that spade-cultivation is far more perfect than that by the plow, and the fact that we never regard the soil as properly prepared for the seed by the plow alone, indicates pretty strongly that some more thorough operation than mere plowing is desirable in any implement moved by steam.

In the progress of all arts and sciences it is observable how principles at one time deemed most vital, come afterwards to be regarded as of secondary importance, and still later again assert their original claim to attention. Pulverization of the soil was more than a century ago advocated by Jethro Tull as the one essential to good husbandry, and he even regarded manure as valuable only as assisting to pulverize the soil, by fermentation. In later years chemistry has as-

sumed a conspicuous position in agriculture, and many have been inclined to regard more the constituent elements of plants and of artificial manures than the mechanical condition of the soil; like quack doctors, whose attention is so much occupied by their specifics that they entirely overlook the condition of their patients.

But now, after the practical failure of the theories of some distinguished chemists, agriculturists are again disposed to regard the physical condition of the soil as of primary importance, and the operations of draining and subsoiling, and otherwise opening a greater depth of soil to the action of the atmosphere and to the roots of the plant, engage the attention of the farmer. As land becomes more valuable it is found more convenient to add another seed bed to the field by preparing it *under* the shallow furrow turned by our fathers, rather than by annexing our neighbor's farm, in the covetous desire to possess all the land that adjoins our own. And so we are looking for more power to work our land deeper and to pulverize it more thoroughly. In England four or five plowings are considered essential to preparation for a good crop of turnips. In America, where labor is more costly and products usually cheaper, we the more need some new aids to our husbandry. Livy says that Romulus, in his distribution of the land, allotted two acres to each citizen, and that after the expulsion of the kings it was increased to seven. Columella tells us that the patrimonial estate on which Cincinnatus employed himself consisted of *four acres!* Yet we, whose single farms are larger than the city of Rome, with her seven hills, are plodding along, bound to the old notion that the plow used by the Romans, or at least its principles of operation, must be forever preserved. Every one knows how much better is the preparation of the garden by forking up and raking, than by turning with the plow and harrowing; and the implement desired now, in place of the plow, is a forking or digging machine that shall at one operation stir the ground to sufficient depth, leaving it as nearly as possible in the condition of a garden bed, prepared with a fork. Such a machine has been attempted in France.

THE FRENCH STEAM PLOW OR CULTIVATOR.

In a walk near Paris last July, I accidentally came upon a steam cultivator or digging machine in full operation. It was a locomotive engine, with, I think, twelve spades or forks, working in pairs, on bent axles, from which the spades, if they may be so called, projected at right angles. My impression is that each pair of spades struck the ground and entered it separately, each of the six pairs successively doing its work, as the locomotive traversed the ground, and thus forking up the soil to the depth of six or twelve inches, at the will of the operator, and four and a half feet wide. The machine was under examination by some commission, at the time, and I was informed that no report had yet been made upon it, and no patent secured, and that no description or drawing of it could be obtained. I took a great deal of pains afterwards to obtain further information; and from my inability to do so, inferred that there were reasons why the inventor desired at present, that his machine should not be made public. I was told upon the ground, that the engine was only of three horse power, but its performance indicated far more. It moved upon broad wheels, however, over the soft ground which had been before stirred by it, and turned without difficulty, at the end of the furrow. The spades, I think, were upon three or more independent axles, and worked between the wheels of the engine. Doubtless the invention will soon be made public, and the full description of it given to the world. With my very limited knowledge of machinery, and my inability to converse on a technical subject in the French language, I could not understand its details, and find it impossible to convey more than a general impression of the working of this machine.—Steam digging machines constructed with spades or teeth set in a cylinder have been before attempted. The great obstacle to their success has been found in the fact, that the moist earth clogs the teeth, and fills the spaces between them. In the French machine, this objection appeared to be obviated by the arrangement of the teeth or spades, which were curved like the nails of a mole, upon several small axles.

No steam plow that has come under my notice appears so likely to prove of practical utility as this French machine. Two points seem to be established, that the steam cultivator must be a locomotive, and that its operation must be not that of plowing, but of spading or digging, or possibly of stirring merely, by drawing through the soil a set of teeth, in the manner of the subsoil plow, or of the English scarifier.

That such an implement will, upon the broad fields of the West, if not elsewhere, soon be seen in common use cannot be doubted. To see clearly, as all must see, the necessity for such an improvement, and at the same time, to have before us so many practical suggestions for its introduction, and to doubt of its ultimate success, were to set narrow bounds to human ingenuity, and to discard our belief in human progress.

CRANBERRIES.—Persons wishing to engage extensively in the culture of cranberries, may find it to their advantage to correspond with WINSLOW ROBERTS, Esq., at Brooks, Maine.

THE PHILOSOPHY OF BATHING.

Once a week is often enough for a decent white man to wash himself all over; and whether in summer or winter, that ought to be done with soap, warm water and a hog's-hair brush, in a room showing at least 70° Fahrenheit.

Baths should be taken early in the morning, for it is then that the system possesses the power of re-action in the highest degree. Any kind of bath is dangerous soon after a meal, or soon after fatiguing exercise. No man or woman should take a bath at the close of the day, unless by the advice of the family physician. Many a man, in attempting to cheat his doctor out of a fee, has cheated himself out of his life; aye, it is heedless and carelessly done every day.

The best, safest, cheapest and most universally accessible mode of keeping the surface of the body clean, besides the once a week washing with soap and warm water, is as follows:

As soon as you get out of bed in the morning, wash your face, hands, neck and breast; then, in the same basin of water, put your feet at once for about a minute, rubbing them briskly all the time; then with the towel which has been dampened by wiping the face, etc., wipe the entire body well, fast and hard—the mouth shut, lungs inflated, breast projecting. Let the whole thing be done quick—say within five minutes.

At night, when you go to bed, and if you get out of bed during the night, or when you find yourself wakeful or restless, spend from two to five minutes in rubbing your whole body with your hands, as far as you can reach in every direction. This has a tendency to preserve that softness and mobility of skin which is essential to health, and which too frequent washings will destroy.

That precautions are necessary in connexion with the bath-room, is impressively signified in the death of an American lady of refinement and position, lately, after taking a bath soon after dinner; of Surgeon Hume, while alone, in a warm bath, and of an eminent New Yorker, under similar circumstances, all within a year.—*Hall's Journal of Health.*

For the New England Farmer.

SPRING AND THE BIRDS.

How many grand intentions had the Supreme Author of nature in view when He created the creatures and things that people and comprise the great universe. Among the many things given to cheer the heart of man, let us notice the birds whose language is for the most part exceedingly musical; tranquillizing, rather than disturbing, our feelings, and I might add, spiritualizing them, as we behold the return of pleasure and plenteousness that surround us. In the spring-season of praise what harmony and consistency there is in the general order of nature; at its first return, some fearless little songster announces it as the morning of the year, and as it advances, what feelings of inspiring pleasure it excites. The woods put forth their green leaves, the orchards their fragrant blossoms, and the earth its flowers, while one by one, or pair by pair, or in flocks, the birds arrive, filling the great orchestra—arranging themselves in the groves, the thickets and the fields, as their habits of life require; everything appears beautiful, and as the morning of each day breaks, the beauty of the scene is heightened; the lark rises in the first feeble beams of morning twilight, and soars to meet the coming sun, when, with open beak, he proclaims the advent of a new-born day; a thousand warblers listen to the strain, and ere the sun has made his appearance, every bush and tree is vocal with the sweetest music, while the vigorous song of the bob-o-link, the measured and varied notes of the robin and cat-bird, accompany us through the day.

Spring passes,—and summer begins with scenes as strikingly illustrative. In this season there is no want of the beautiful, the gentle, or the lovely; the gaiety of forest, field and mountain; the mild sky without a cloud of storm, breathes its soft winds, while the sun, with its warm beams, puts the earth in its gayest attire; there is perfect consistency also in which nature has directed the birds of song; now, as though it was contrived, the thrush takes the lead, whose plaintive, mellow notes more sweetly accord with the stillness of the morning and evening hour, while the martin and the swallow, with their easy flight and peculiarly delicate notes, cheer us through the day. A. F.

Danvers-port, April 5, 1858.

For the New England Farmer.

PUMPKIN-SQUASHES!

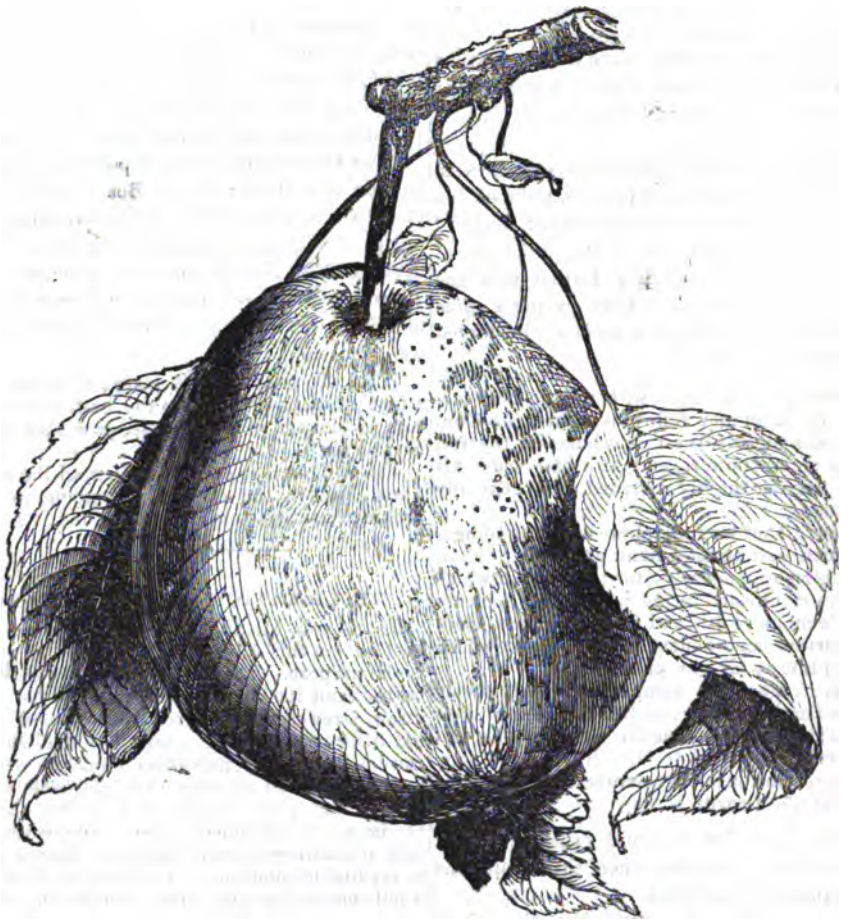
Your correspondent "Essex," in the January number of the *Farmer*, speaks of the vexed question, "Will seeds taken from squashes yield pumpkins, or vice versa?" My opinion is they will not. But seeds taken from either may produce what are called in these parts *Pumpkin-Squashes!*

In the year 1856, I raised two of the finest pumpkins I ever saw, of the old-fashioned cornfield variety, from a vine which sprung up near, and partly between my summer and winter squashes, and also in the vicinity of some custard squashes. I kept one of the pumpkins until the 20th of April, and on cutting it I found it so firm, sweet and fine, that I saved all the seeds, and last year planted them, and no others. From those seeds I raised long-necked summer squashes, and custard squashes, apparently almost pure, and nearly everything else in the shape of pumpkin-squashes that can be imagined, but only two pumpkins that would ever have been suspected of having grown from the planted seeds, and those, although they resembled the parent pumpkin very closely, on being cut were found to be almost too poor to feed to the cattle, as was the product of all those seeds without regard to its outward appearance.

I would like to ask you or any of your correspondents to explain why mixing a good squash and good pumpkin is sure to spoil both? Who ever saw a good pumpkin-squash? A. M. P.

Elmwood, Cranston, March 1, 1858.

WOODLANDS.—The careful attention of the reader is called to the article on *Woodlands*, in another column.



FLEMISH BEAUTY PEAR.

The Flemish Beauty is universally admitted, we believe, to be one of the finest pears now under cultivation. "In good soils," Downing says, "and upon open situations, the Flemish Beauty is certainly one of the most superb pears in this climate. We have seen specimens, grown on the banks of the Hudson which measured twelve inches in circumference, and were of the finest quality.

"The tree is very luxuriant, and bears early and abundantly; the young shoots upright, dark brown. It should be remarked, however, that the fruit requires to be gathered sooner than most pears, even before it parts readily from the tree. If it is then ripened in the house, it is always fine, while, if allowed to mature on the tree, it usually becomes soft, flavorless, and decays soon.

"Fruit large, obovate. Skin a little rough, the ground pale yellow, but mostly covered with marblings and patches of light russet, becoming reddish brown at maturity, on the sunny side. Stalk rather short, from an inch to an inch and a half long, and pretty deeply planted in a peculiarly narrow, round cavity. Calyx short, open, placed in a small round basin. Flesh yellowish-white, not very fine-grained, but juicy, melting, very saccharine and rich, with a slightly musky flavor." In eating last of September.

Col. Wilder says, "It is a very large, beautiful, melting pear. One of the best in cultivation. Ripe in October."

STATE BOARD OF AGRICULTURE.

The members of the Board met at the State Farm at Westboro' on Wednesday, 7th inst. Of the new members present were Messrs. G. M. ATWATER, of the Hampden Society, SIMON BROWN, of the Middlesex Society, RICHARD S. FAY, of the Massachusetts Society, CYRUS KNOX, of the Hampden East Society, and CHARLES K. TRACY, of the Berkshire Society.

In the absence of His Excellency, Gov. BANKS Col. WILDER was invited to preside, and took the chair and called attention to the recent death of Col. MOSES NEWELL, and to the propriety of noticing it before proceeding further with the business of the meeting. After paying a noble and generous tribute to his memory, he offered the following resolutions:—

Resolved, That we learn with the deepest sorrow the death of our fellow-associate, the Hon. MOSES NEWELL, of West Newbury, in the full maturity of his powers, and at a time when his services were so highly regarded and generally recognized.

Resolved, That we fully appreciate the obligations which rest upon us and upon the community to cherish his memory, for the interest which he always manifested in the cause of Agriculture in this Commonwealth, and for the uniform kindness, courtesy and benevolence of heart which endeared him to all who knew him.

Resolved, That we sympathize most deeply with the family relatives of the deceased in their severe affliction, and that the Secretary be, and he is hereby requested to furnish to them a copy of these resolutions, and to enter them upon the records of the Board.

Messrs. FAY, BROOKS and others followed with appropriate remarks, when the resolutions were unanimously adopted.

The report of the Superintending Committee of the Farm was then read to the Board. It appears from this that the immediate care of the farm for the present year is in the hands of a Superintending Committee consisting of eight persons. At this meeting they reported a general plan of operations to the Board, which was adopted. This plan had evidently been prepared with care, after a critical examination of all the resources of the farm to furnish manure, and then the amount of land to be cultivated was designated and also the kind of crop to be grown upon it. As an illustration of the plan we will take a single item, that of

"INDIAN CORN.—Four acres to be manured with 7½ cords per acre of barn-manure, worked in with cultivator; ten bushels of ashes and 100 lbs. of plaster to be added at first hoeing. Alternate rows throughout the whole field planted in hills, and drill three feet apart. Hills three feet apart in the row, four plants to be left in the hill, and the plants left nine inches apart in the drills. The seeds to be at exact distances in the drills, and leave the same number of plants in a row of drills as a row of hills."

This will give the reader an idea of the systematic plan which is laid down for the present management of the crops. The arrangements seem to us well considered and judicious, and if faithfully carried out, will result in rich harvests, and many valuable facts which must be of importance to farmers in every part of the State.

After the reading of the report and some discussion upon its details, the Board proceeded to elect two members of the Superintending Committee to fill the vacancies occasioned by the death of Col. Newell, and the absence of Mr. Tower, of Berkshire county, when SIMON BROWN, of Middlesex, and JOSIAH WHITE, of Worcester, were chosen.

Voted, To award to J. B. HULL, of Stockbridge, a first premium of $10, for the best acre of carrots, a sample of which was presented at the State Fair.

Voted, That it is expedient to hold the second State Fair in the city of Springfield, in 1860, provided a satisfactory guarantee fund is secured.

For the New England Farmer.

RECLAMATION OF LIGHT LANDS.

Thank you, Mr. Editor, for your practical suggestions on this subject. They strike me as pat to the purpose. The renovating power grows upon the land itself; this is as it should be. If the straw, strewed in the furrows, can be made to decay before the coming season, so that the land can be thoroughly pulverized, and the decayed vegetable matter intermingled, this meets my notions. But your experience is better than all theories. A continued course of like culture for *half a dozen years* will thus place barren plains in creditable condition. This is what is wanted, a self-renovating power upon our fields. Such a power, rightly understood and properly used, would do more towards restoring the fertility of our farms than all the deposits of all the fishes and birds on the Pacific. What is wanted in farming to advantage is the power to use the resources at command in the best manner. Never borrow of a neighbor when you can get along tolerably without borrowing. Never bring fertilizers from afar when they can be had near by. There is nothing like *trying*. Many a game has been lost for want of effort. We have a fine opportunity to apply your recommendation on our county farm, and I hope you will ere long allow us the privilege of your personal inspection of it.

April 12, 1858. INQUIRER.

SHEEP AND DOGS.—An exchange paper says, that "fourteen farmers of Stockbridge, Mass., within the past five years, have suffered the loss, by dogs, of 295 sheep, valued at $1025. One farmer alone computes his killed and injured animals at 177, and their value at $450. Some of the sheep were of choice varieties, and valued at from $5 to $20 per head." We doubt not that of many another town in this State and Massachusetts, a worse story may be told.

THE SKIN THE SEAT OF PAIN.

The same Infinite Wisdom which has contrived pain for our protection has also distributed it in a manner which causes it to fulfil its defensive purposes with the least suffering to its subjects. The chapters which Sir Charles Bell devoted to this question in his work on the "Hand" are alone, from their originality, and the striking evidence they afford of design, worth all the rest of the Bridgewater Treatises. The skin is the advanced guard through which every injury to the other parts must make its way. The skin, therefore, required to be the seat of a peculiar sensibility both for its own security and to impel us to flinch from the violence which would hurt the flesh beneath. Forming our notions of pain from what we feel at the surface, we imbibe the idea that the deeper the wound the more severe would be the suffering, but this, says Sir Charles Bell, is delusive, and contrary to the fact. The surgeon, he adds, who makes use of the knife, informs the patient that the worst is over when the skin is passed, and if, in the progress of the operation, it is found necessary to extend the outer incision, the return to the skin proves far more trying than the original cut, from the contrast which it presents to the comparative insensibility of the interior. The muscle is protected not by its own tenderness, which is by no means acute, but by the tenderness of its superficial covering, "which affords," says Sir Charles, "a more effectual defence than if our bodies were clothed with the hide of a rhinoceros." To have endowed the delicate internal textures with an exquisite susceptibility to the gash from a knife, or a blow from a stick, would have been superfluous torture. The end is effectually attained by spreading over them a thin layer of highly sensitive skin, which is too intolerant of cuts or bruises to allow any harm to approach it, which it is in our power to avert. In addition to the protection which is thus provided against occasional dangers, the skin, by its sensibility, is essential to our existence under the hourly conditions of life. It is the skin which acts as a thermometer to tell us whether the temperature is suited to our organization, and warns us alike to shun pernicious extremes of heat and cold. It is the skin again which prompts the instinctive restlessness that preserves the entire frame from decay. A paralytic patient must be supported upon soft pillows, and his position frequently changed by the nurse, or the uninterrupted pressure upon the same surface stops the flow of the blood, of which the consequence is the speedy destruction of the part, mortification, and death. When Sir Charles Bell called the attention of his audience to this fact, in a lecture delivered before the College of Surgeons, he bid them observe how often, as they listened to him, they had moved upon their seats that they might shift the weight of their bodies, and relieve the portions which were beginning to be cramped. "Were you constrained," he said, "to retain one position during the whole hour, you would rise stiff and lame." Even in the unconsciousness of slumber the contrivance continues to act, and, were it otherwise, sleep instead of being "nature's sweet restorer," would derange the circulation and cripple our frames.

Not only have different parts of the system sensibilities which differ in degree, but sensibilities which differ altogether in kind, so that while both shall be acutely alive to their appropriate stimulus, one or either may be dead to the application which rouses and tortures the other. "A man who had his finger torn off," writes Sir Charles Bell, in his "Animal Mechanics," "so as to hang by the tendon only, came to a pupil of Dr. Hunter. I shall now see, said the surgeon, whether this man has any sensibility in his tendon. He laid a cord along the finger, and, blindfolding the patient, cut across the tendon. Tell me, he asked, what I have cut across? Why, the cord, to be sure, was the answer." The tendon was as insensible as the string itself. Further experiments have shown that the tendons of the muscles, the ligament which hold together the joints, the cartilages which act as a pad to the extremities of the bones where they work upon one another, feel neither cuts nor burns. But there is a very different result if they are submitted to stretching, laceration, and concussion. Then they raise the warning voice of pain, and obtuse to what might seem a more agonizing species of injury, they are intolerant of the less. The reason is obvious. The skin is the fence to the inner membranes from the first class of evils, but if the skin is to have the play and power of adaptation which is essential to its functions, its suppleness would be too great to be a check upon the movements, which affect the cartilages, the ligaments and the tendons. These consequently are made impatient of concussion, of tearing, and of stretching, that we might not leap from heights, run with violence, or twist our joints with a force inconsistent with the strength of the human fabric. The pain of a sprained ancle shows how sufficient is the punishment to put a check upon any excesses of the kind. Exchange the sensibilities, confer upon the membranes which are interposed between the joints, or which tie them together, the same feelings both in kind and degree which belong to the skin, and the common movements of the body, or even the weight of one foot upon another, would have been attended, says Sir Charles Bell, with as much suffering as we experience when we walk upon an inflamed limb.—*London Quarterly Review.*

THE SEASON.

The winter just passed all along the Atlantic sea-board, and extending into Vermont, has been remarkable for its temperate character and the absence of snow and rain.

On the *second* of February, there were copious rains which filled the streams, and partially soaked the ground. These were succeeded by warm suns and mild winds, so that on the *fifth* we saw grass growing on the south side of buildings which had attained a length of more than six inches, and had all the freshness of grass in June.

The next rain which fell in this region was on the 21*st of March*, there being slight showers only, through a portion of the day, and no other rain fell during the entire month. March was remarkable, too, for the absence of the usual high

winds which herald in the spring, and for that blustering activity which has given the first month of spring no very enviable character. The last days of this month were sunny and genial, and bluebirds, robins, blackbirds white-belly swallows, song-sparrows and meadow-larks appeared.

Our usual winter birds, however, scarcely showed themselves at all,—there not being half as many seen as during the winters that are altogether more inclement.

April came in warm, with soft, mild winds, with streams and springs remarkably low and the earth unusually dry. Farmers commenced plowing in its first week, and more farm-work had been accomplished before the 10th than was done last year by the 20th, or perhaps the 25th. The first rain in this month fell on the 9th, which at once put a new aspect on the face of the earth—a lively green taking the place of the brown herbage which had so long met the eye.

These April showers water the earth, already warmed by unclouded suns, and prepare it for the handiwork of the husbandman, and he will enter anew, we trust, upon his healthful and delightful employments with filial trust, with feelings of more intimate relationship with Him who orders all events, and with a higher appreciation of His ever-watchful interest in, and over us, and all our affairs. With trusting hearts and stout hands, the farmer has nothing to fear, as He who created and moves all things will send the early and the latter rain, seed-time and harvest, and whatever else that shall work together for his good.

In this trusting spirit let us turn up the fresh furrows and sow the seed in gladness, rejoicing *now*, in the pleasant things of life, and so all along the way to the ingathering of the Harvest.

MEXICAN CURE FOR HEADACHE.

Proper diet and exercise, cheerfulness of mind and agreeable social intercourse will do more towards regulating the stomach and bowels in those predisposed to this dreadful pain, than any plan of medical treatment which can be suggested. However, vinegar bandages, applied to the temples and forehead, give great relief. Mr. Thompson, a traveller in Mexico, describes an efficacious remedy used there. The head must be bent down on the side from which the pain proceeds, whilst a teaspoonful of rum, or any other spirit, is introduced into the ear. The patient should then remain quiet till the pain subsides, which is usually in three or four minutes. This I have tried myself, and derived great benefit from it on more than one occasion.

AMERICAN FARMER'S MAGAZINE.—We have just risen from the perusal of the April number of this work, by Prof. J. A. NASH, of New York, with a degree of gratification not often felt. Paper, print, doctrines, all of the highest order. He ought to have 100,000 subscribers. Why don't farmers study their own interest enough to send him 10,000 subscribers this year to begin with? Address *American Farmer's Magazine*, 7 Beekman Street, New York.

EXTRACTS AND REPLIES.

A LIVING FENCE.

I am about to burn and clear a piece of ground which will destroy the old brush fence, and now for a new and valuable one. Stones are not very plenty. The land is upon a steep side-hill, and I think of setting a row of pine trees about three feet apart, and supporting a wooden fence by the side of them for a few years until they get large enough to stop cattle; the land I intend to use as pasture. I have hundreds of young pines growing upon a pasture near by, which will have to be removed soon. What do you think of such a plan? JOHN W. NYE.

REMARKS.—If you protect the pines from the cattle until they are sufficiently large to nail a rail or strip of board against them, you will have a beautiful living fence, that will probably last a hundred years, and then furnish you or somebody else a fine lot of wood. Hope you will carry out your design.

SUPERPHOSPHATE OF LIME FOR SQUASH BUGS.

Last spring I planted a patch of marrow squashes, to try the virtue of superphosphate of lime as a preventive of the squash worm or borer, as I had failed to raise any squashes for several years on account of this destructive worm. After the seeds came up I sprinkled some of the lime on the young plants, first to keep off the small black beetle, and then to keep off the striped bug,—all of which was successful. I still put it around the roots to prevent the borer, and repeated it after each hoeing, taking care to have it encircle every stalk; when the young fruit appeared, I put it on for the last time and found that it prevented the worm or borer entirely; it also kept off the long pumpkin bug. The result was, I had a splendid crop of squashes for the first time for many years. Will others try it?

Spring Grove, 1858. S. A. SHURTLEFF.

ESSEX COUNTY FARM.

We find this farm much better than it was at first apprehended to be. We think interested motives have prompted some to give it a bad name. We find 60 acres of it to be as good as any other pasture of like extent. We find the meadow bordering on the Ipswich River to be very good of its class. It has yielded a fair crop of grass for many years, without any other dressing than the flow of the river, and we know no reason why it will not do this as long as water runs. As to the light land on the plains, it can be reclaimed by proper plowing and fertilizing. Such things have been done, and can be again. I have thought if this farm can be so managed as to regenerate itself—then will every acre of this Commonwealth be worth possessing and experiment-

ing on. But we are clearly of the opinion, that we should not be justified in expending our funds upon the farm. Look where you will, you will see examples in abundance, of money expended by *visionary farmers*, that will not be found again in their day and generation.

March, 1858.

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A FINE COW.

Mr. ISAAC DEMSEY, of this town, owns a remarkably fine cow, now eight years old, raised in the neighboring town of Middleton, of the breed common to that vicinity. She was raised by Mrs. Flint. Her product for the past year, commencing with the spring of 1857, was as follows:

Calf sold at	$11,00
291 pounds butter, at 28 cts	81,48
50 pounds cheese, at 8 cts	4,00
700 quarts milk, sold and used, at 5 cts	35,00
	$131,48

COST OF KEEPING.

2 tons English hay	$30,00
Corn fodder	8,00
7½ bushels meal	7,50
Summer pasture	8,00
	$53,50
Net profit	$77,98

This cow had the small quantity of one quart of meal per day for eight months, making 7½ bushels, as will be seen by the above account, and during one week made 13¾ pounds of butter. She was milked 11½ months. Can this product be exceeded? C. P. P.

Danvers, March 16, 1858.

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SOW, AND SEVENTY-ONE PIGS!

Having often seen accounts in the *Farmer* of valuable hogs, and having seen especial notice of the "Chester County Hogs," I thought I would give you an account of a breeding sow I now own, and the return she has made me. She is three years old, weighs 500 pounds and has dropt 5 litters of pigs, as follows:

April 15, 1856	12 pigs.
September 15, 1856	13 "
April 25, 1857	12 "
September 12, 1857	17 "
March 10, 1858	17 "

Making in all 71, dropt alive, perfectly formed, healthy and pure white. Of this number, she has raised to 5 weeks of age 63, having lost a few of the two last litters by laying on them. Keeping a few of the best of each litter, I have sold the balance at $5 each.

Her breed is ½ Suffolk, ½ native, pure white, long body, small head, short neck, fine bone and square built. She is a small eater, and takes on fat easily—in fact, during the period of gestation I am troubled to keep her sufficiently lean; her pigs often weigh 350 pounds at 8 months, fed on skimmed milk, apples and pumpkins, &c., until 6 weeks previous to slaughtering, when I give them all the meal they will eat.

A neighbor has three of the litter dropt September last, which now weigh 300 pounds, and their only feed has been skimmed milk and boiled pumpkins. Truly, Sir, there is no need of sending to Chester, Penn., for a breed of pigs, when any farmer, with a little care and attention, may get up one equally good.

Groton, Ms., 1858. CALVIN BLOOD, 2d.

A GOOD COW.

I have a cow 6 years old in the spring of 1856. She calved June 20, 1856, calf remained 8 days; cow made 187½ pounds of butter in 175 days—had but this cow, and during this time presume we used one pint of milk per day, 87½ quarts. She gave from Dec. 13, last day of churning, to April 5, 1857, 566¼ quarts. We sold to one family 333½ quarts, at 6 cents, $20,01 Balance sold and used, at 5 cents, $16,01. Butter, 187½ pounds, at 30 cents, $56,20. Total, $92,22. All of her skim milk was given to a pig.

1857.—Calved May 13th. Sold calf 19th, from which time to January 19, 1858, 237 days, made 215½ pounds of butter. We had a larger family than in 1856, and used much more milk and cream. She was given to me when a week old by a gentleman who called her a full-blooded Ayrshire. She is entirely red, with the exception of white tip on tail, gentle and handsome. She has been well, but not extravagantly fed.

Cohasset, Mass., 1858. JOHN WILSON, JR.

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THE ERMINE.

For the information of your Harvard correspondent, Mr. SAWYER, I would say that the animal he found in his cellar was the ermine, an animal not differing much in size or form from the weasel; his color being the same in summer with the exception of his toes and the tips of his ears, which are white; in winter he is white all but the end of his tail, which is black. Their habits are like those of the weasel, and they are considered by some as a species of the same family, but by others as a distinct species. Formerly, they were seen very frequently, but I have not seen more than one or two for the last 20 years. They are deadly foes to rats, mice and squirrels, which they kill in great numbers for their blood. The fur is very valuable, and the skins sometime sell as high as $2 each. The history of this animal I think I read in *Thompson's Natural History of Vermont*, several years since. B. F. CUTTER.

Pelham, N. H., March 26, 1858.

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HOG CHOLERA.

In looking over the census of the town farm the last year, I see that a loss of $1300 is charged as accruing from this disease, all of which is alleged to have occurred in the course of a few weeks. No satisfactory explanation of this disorder has ever been given. It is conjectured that they had imbibed *strychnine* from the *whisky factories*, where they were fed when young. If such be the fatal effect on the *brute creation*, how much more powerful must be the effect on the *men* who use the *whisky itself* thus adulterated?

March, 1858. SOUTH DANVERS.

OFFICERS OF THE NORTH MIDDLESEX AGRICULTURAL SOCIETY for 1858:

TAPPAN WENTWORTH, Lowell, *President.*
J. C. BARTLETT, Chelmsford,
ELIJAH M. REED, Tewksbury,
A. L. BROOKS, Lowell,
J. B. V. COBURN, Dracut, } *Vice Presidents.*
S. J. VARNEY, Lowell, *Recording Secretary.*
A. R. BROWN, Lowell, *Corresponding Secretary.*
ALFRED GILMAN, Lowell, *Treasurer.*

For the New England Farmer.

A METHOD OF RAISING GRASS.

I have been reading with much pleasure, and, I think, profit, the last annual report of the Massachusetts Board of Agriculture. As I do not learn from it that any one has adopted a method of raising grass precisely like my own, I take the liberty of communicating to you my method, as well as the steps by which I arrived at it. I know very well that we are all inclined to regard our geese as the most beautiful swans, but if my ideas are worth nothing, the paper may serve to kindle your fire.

My land is a clayey loam, resting on a subsoil, the first layer of which is a mixture of clay, loam and gravel, that, brought to the surface, exposed to the frost and mixed with the surface soil and a liberal dressing of manure, makes a productive grass land. Below this, at the depth of about two feet, is a hard pan of blue clayey gravel, almost as impervious to water as a cemented cellar bottom, and this rests on the underlaying slate rock at the depth of from five to twenty-five feet. The land in no part is hilly, but has descent enough to carry off the surface water.

It came into my possession in 1851, and I cut that year about four tons of inferior hay from seven acres. The next year I sowed about half an acre with spring rye, clover, herdsgrass and redtop seed. The ground had corn and potatoes on it in 1851, and was in good condition. The summer was hot and dry. The rye did badly and the grass almost disappeared under the scorching suns of July and August. It rallied somewhat before the next summer and produced from fifteen to eighteen hundred weight of hay from the half acre.

In 1852 I had two and one-fourth acres in cultivation with corn and potatoes, on which I spread and plowed in, twenty ox-cart loads of manure, and put ten more in the hill per acre. In September, I dug the potatoes on one-fourth of an acre, spread and plowed in three loads of manure, and seeded down with herdsgrass and redtop. After the corn was harvested, I had an acre more plowed and harrowed, and about the twentieth of November, sowed half a bushel of herdsgrass and a bushel of redtop seed on it, and rolled the ground just as it froze for the winter. In the following spring, I seeded down the remaining acre with barley and a mixture of clover, herdsgrass and redtop seed. I had sixteen bushels of barley, and the grass looked finely in the autumn. The ground seeded the preceding September, although the grass suffered considerably from the winter, produced about eight hundred weight of hay and the acre sown in November a little over a ton.

In 1854 my field appeared as follows: on the quarter acre seeded in September, the herdsgrass had spread and the redtop came in so as to cover the ground well; on the acre sown in November there was a beautiful strong turf covering the whole surface, while on the acre sown with barley the winter had killed a good deal of the clover and left many spots bare, where the ground had settled below those portions covered with grass and the turf was generally broken and uneven. On the one and one-fourth acre seeded in autumn, there was about three tons of hay, and on the acre sown with barley about thirty hundred weight. After haying, I spread two hundred and fifty bushels of leached ashes on the acre and one-fourth sown in the fall.

In 1855, which was a bad hay year, I had about two and a half tons from the acre and one-fourth, and about twenty-five to thirty hundred weight from the acre sown in spring. The latter had become mostly redtop. I let it stand till the seed was ripe enough to shell out in making the hay, and in the fall, I spread two hundred bushels of leached ashes on it. This brought in considerable clover and thickened up the redtop so as to give me a very fair crop, but it has always fallen below the part sown in the autumn by ten to fifteen hundred weight per acre. These crops have mostly been sold standing on the field, the purchaser having the privilege of weighing whenever he chose to do so, rather than to take them at my estimate, and in all cases when weighed, they have exceeded my estimate.

Thus far it is evident that my experience is in favor of late fall sowing; for although the September sowing, with its extra dressing of manure, slightly exceeded the November sowing the first year, there has been no difference since. The result has been still more decidedly against raising spring grain on such land as mine. The cost of the grain sown, with the extra labor in harvesting, threshing, &c., would amount to much more than the difference in the average value of a crop of spring grain and that of an average first crop of grass, even should the land be plowed for the grass, as in the above experiment. In addition to this, if recollected that the annual grass crop, when the ground has been exhausted by ripening a grain crop, falls at least half a ton below that which follows the corn immediately, the question to my mind is settled.

At the risk of tiring your patience, I wish to give you the results of an attempt to get a large crop of grass the first year. In the spring of 1854, I had an acre by the side of the lot, on which I raised barley in 1853. It was in corn the year before, and had twenty loads of manure to the acre, one-half spread and plowed in, and the remainder in the hill. This year, 1854, I spread twenty loads per acre and plowed it in, then spread two hundred bushels of leached ashes and furrowed so deep that the corn, which was planted in drills, could be covered without raising the rows above the surface. There was compost put in the furrows equal to ten loads of manure per acre. The field was cultivated twice. The first time the ground was levelled and the weeds cut up, the second time the small stones were picked up and wheeled to the edge of the field; herdsgrass and redtop seed were sown and the ground raked over with a common hand rake, such as is used in the hay field. The labor, except picking up the stones, was just about equal to two hoeings, and the surface was left beautifully even. I had a forest of corn stalks, about two cart-loads of smutted ears, and fifty bushels of sound corn to the acre. The season was hot and dry, and in the fall, I found no grass except on a wet place, and under some large apple trees. As my ground was in fine condition and very smooth, I did not like to plow it up again until I tried some way to get it into grass. In the fall, as soon as the ground froze enough to hold the stumps of the

corn stalks firmly, I took a sharp hoe and cut them off even with the surface of the ground, raked off the rubbish and sowed half a bushel of herdsgrass and a bushel of redtop seed on the acre. The next spring as soon as the weather became warm enough, the grass came up beautifully over the whole piece. The summer was wet and warm, and I cut more than a ton and a half per acre for the first crop. In 1856 and 1857 I had three tons per acre each year for the first crop, and rowen enough to make the whole amount in the two years not much short of seven and a half tons.

About the middle of June, 1854, I sowed a quarter of an acre with oats and grass seed, and mowed the oats for fodder while green. The grass on part failed from the hot, dry weather. I went over the ground in November and sowed the vacant spots with grass seed, and it came up and grew perfectly well the next spring.

In justice to summer sowing among corn, I will say that I tried it again in 1855, which was a wet season, and it did well and gave a larger first crop than I generally get from late fall sowing.

Early fall sowing did well in the instance in which I tried it, but I have not repeated the experiment, as I observe on the land of my neighbors that grass sown in this way often suffers from the winter frosts, while I have never known late fall sowing to fail. I find it very little extra labor, if I begin right in the spring, to have my ground all ready to seed down at the setting in of winter. I proceed as detailed in my experiment on my corn field in 1854, except I do not sow any grass seed *till I am confident it will not vegetate till the next spring*, say from the twentieth of November to the setting in of winter. I have pieces of late sown grass, which have been mown one, two, three and five years respectively. The average results have been about twenty-five hundred weight for the first crop per acre, and including rowen three tons per year afterwards.

How long they will hold out time must determine. As my land was not exhausted by spring grain and I do not fall feed at all, or cut the rowen when it can be safely avoided, I expect a fair yield for several years to come. I prefer November seeding, because I believe there is an absolute certainty that every good seed sown in this way will vegetate the next spring, and will have the whole season to grow before the winter frosts. Even on land where the water stood for weeks it did well. I prefer it for the economy of this method. If the corn is planted in drills as above described, I believe the increased product will fully compensate for the extra work, and the cutting off the stumps of the corn stalks and raking off the rubbish are much less labor than plowing and again levelling the ground, as must be done for a grain crop. I should not expect the same advantages on sandy or gravelly land as on clayey and level wet land, which are much more liable to have their crops winter-killed, and on steep hill sides it would not be admissible on account of the washing of the winter rains.

There are three things which I regard as indispensable to the successful culture of grass. The first is to put the land in good condition by thorough tillage and a liberal application of fertilizers; the second, to get a good healthy set of grass roots that will cover the ground entirely; the third not to exhaust both the grass and the land by fall feeding or cutting the second crop, unless it is so luxuriant as to endanger the roots of the grass. By observing these things strictly, I believe it will be found that a heavy yield of grass is not an uncertain or doubtful result.

M. D.

For the New England Farmer.

PEARS UPON QUINCE STOCKS.

Where is the benefit of thus cultivating? At the late meeting of legislative farmers, (who are of course among the best experienced,) I understood Mr. EARLE, of Worcester, and Mr. LAKE, of Essex, to say, when they transplanted the pear which had been grafted upon the quince, they were careful to set the trees so that the place of junction should be several inches below the surface of the ground, so that the roots should start anew from the pear stock, and the tree be mainly supported by such roots. Why, then, graft on the quince at all? Is it not quite easy to raise from the seed as many young pear trees as may be wanted? Can there be any benefit, in interposing the dwarf quince, when much more substantial and beautiful wood can be grown from the pear seeds alone?

Why not engraft the pear on the apple stock? Can any one say that the stock in the least degree modifies the quality of the fruit? From what we have learned, we presume pears on quince stocks will fruit earlier, than otherwise; and we believe also they will decay earlier. I throw out these inquiries to elicit information, and not to communicate it. I am not convinced that there is any considerable benefit accruing from the growing of pears upon the little quince. Merely because they can be made thus to grow, is no reason why they should be so grown. ESSEX.

April, 1858.

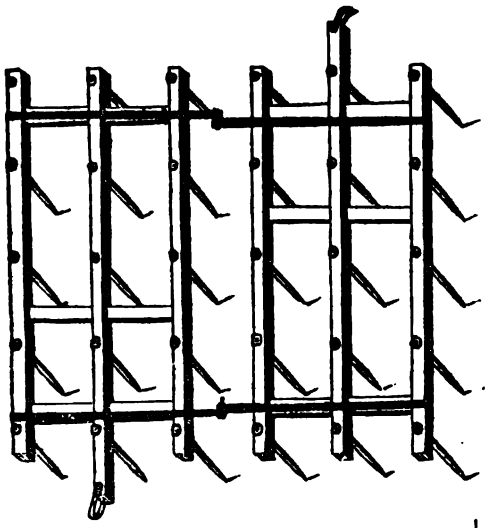
CLOUDS OUTSIDE, SUNSHINE INSIDE OUR HOMES.—Whether men do business and have dealings with others in city or in country, there will be, occasionally, unpleasant occurrences, causing sourness, irritation or discomposure, to a greater or less degree. Temper will be ruffled by losses, disappointments and dealings with the stupid and dishonest. If we could leave all these trials and the irritation they may have produced outside when we return to our homes, and make resolute efforts to have nothing but peace, love and sunshine inside our homes, the comfort of ourselves, our wives and our children would be much promoted. To accomplish this may be difficult, but it is correspondingly desirable. If we make a determined effort, it will not always be in vain. Success will occasionally reward us, and encourage us by its sweet satisfaction to renewed efforts. And when success becomes habitual, how much happier will be our homes! For the man who goes home sour and irritable, with a cloud upon his countenance, is sure to sadden and perhaps to sour the hearts of his wife and children. Whereas, he that succeeds in leaving all these outside, will make his coming welcome, and his home a scene of smiles and sunshine.—*Country Gent.*

IMPROVED HINGE HARROW.

The true work which a harrow should perform is generally quite imperfectly understood. Its principle office is to pulverize,—to make the soil finer and lighter than the plow leaves it, as this condition of the soil is not only important in order to facilitate labor in the cultivation of crops, but important in order to bring the soil into that friable condition, which will attract and readily receive those atmospherical influences upon which plants greatly depend for their growth. Levelling with the harrow is of secondary consequence.

A light harrow, with rather long, slender and smooth teeth, drawn quickly through the soil, will do *more* and *better* work, than a heavy one moved slowly.

The harrow represented below may be folded double, or separated into two parts, for the convenience of transportation or other purpose. Either half may be lifted for any purpose while the implement is in motion; and the easy and



independent play of the parts up and down upon the hinges, enables the instrument to adapt itself to the surface of the ground in all places, so that whether going through hollows, or over knolls and ridges, it is always at work, and every tooth has an operation upon the soil. There are thirty teeth in the harrow, and yet they stand equi-distant and wide apart each way, so that while from their number and arrangement the ground is worked fine, they are not liable to clog. This harrow is made heavy for rough land and the pulverizing of sod furrows, or light for grain and grass seed. It is a very light, pretty harrow for one horse, when made of bars 2½ inches square, with teeth of half-inch steel; and thus made, and carrying a breadth of five feet, one horse will harrow as much ground in a day with it, as is usually accomplished by two horses. It is made to draw either end forward; and when the teeth become dull by working in one direction forward, the team may be hitched to the other end, and they are sharp again.

This harrow was "got up" by Mr. HOLBROOK, our Associate Editor, who has given the subject his usual discriminating attention, and finds upon practice with it, that it operates better than any other he has used.

EXTRACTS AND REPLIES.

GRAFTING CHERRIES, PLUMS AND PEACHES.

Will you inform me of the best time of the year for grafting stone fruit, such as cherries, plums and peaches; and also if peaches grafted into the wild cherry will do well?

PLUM AND PEACH.

Osterville, March, 1858.

REMARKS.—Cherries should be grafted as early in April as the weather will allow it to be done comfortably to the grafter, and in which the wax may be handled. Plums should come next, and then peaches—but all some time in April. We have never worked the peach on the wild cherry, and do not know how it would succeed.

RECIPE FOR MAKING SAP BEER.

Take one pound of good hops, put them in a clean barrel, and take it to the orchard; fill the barrel with sap and set it away for use; in about two weeks it will be fit for drinking, and will remain good till June.

THOMAS G. HOLBROOK.

Manchester, Vt., 1858.

TARRED PAPER FOR ROOFS.

"A. S." may find plenty of tarred paper for roofs or sides of buildings at the paper store of Messrs. CONANT & HOOD, 141 Blackstone Street, Boston. It is sold for about $3,50 per 100 lbs. One pound will cover about ten square feet.

WHERE MEATS AND COOKS COME FROM.

There is a satisfaction in the fact that your literary correspondent, "W. A. A.," applies to us farmers to instruct him as to the origin of the lines which he misquotes; but he is right, Mr. Editor, for I can assure him the sons and daughters of our farmers are as competent to answer his inquiry as those who have learned more and know less.

If "W. A. A." will read Dr. Oliver Goldsmith's "Retaliation," he will be amused if not instructed; and he will find in David Garrick's reply, among other caustic things, the following

JEU D'ESPRIT.

"Are these the choice dishes the doctor has sent us?
Is this the great poet whose works so content us?
This Goldsmith's fine feast who has written fine books?
Heaven sends us good meat, but the devil sends cooks."

Framingham, March 30, 1858. J. W. C.

MILL FOR GRINDING SCRAP CAKES.

I am in want of a mill or some kind of a machine for granulating the hard cakes made from beef scraps. Where can I get one, and at what cost? SUBSCRIBER.

REMARKS.—We do not know of any such mill.

For the New England Farmer.

FIFTH ANNUAL REPORT OF THE MASS. BOARD OF AGRICULTURE.

I have glanced my eye over this paper of about 300 pages, and find it truly practical and instructive. As was to be expected, much of it is filled with the details of the Exhibition, held under the supervision of the Board. This is as it should be. Such an exhibition should be a presentation of the best products of the Commonwealth—and such a Report should be a fair view of what was presented. In this way alone, from year to year, can we have a correct idea of the progress made. That our agriculture is in healthy progress, no one who has carefully observed for the last thirty years can for a moment doubt. That our State has done better than any of her neighbors, I am not prepared to say. That there is room for many and greater improvements, I cannot doubt. ESSEX.

BOYS' DEPARTMENT.

MATHEMATICAL MYSTERIES.

Take a straight line one inch in length, and divide it into two equal parts or halves, divide the half into two quarters, the quarters into two eighths, the eighths into two sixteenths, and so on, continually bisecting the fraction last arrived at. It is logically obvious that, by this process of perpetual halving, we can never reach the end of the line, although its length is only one short inch. There will always remain a fraction to bisect. By increasing the number of bisections indefinitely, we can approach indefinitely near to the extremity of the line, but through all eternity we could not actually arrive at it! There is a geometrical curve called the hyperbola, which is so related to a straight line called the asymptote, that they approach each other continually and never meet.

The geometer will show you in a diagram both curve and line, not many hair breadths apart, and yet he can demonstrate, by logic the most vigorous, that the line may travel through all eternity toward the curve, and still no meeting take place between them. There is an eternal convergence across a space not broader than our pen, but no possible concurrence!

The algebraist will show you the commencement of a series of numbers, the terms of which are absolutely infinite, and yet the sum of the whole—the precise sum—may be no more than one, two, three or four. He will tell you respecting a progression beginning with unity as the first term—what the second term is, what the hundredth term is, what the hundredth-thousanth-millionth term is, what any term you please to ask him is; and he will further tell you that the whole infinitude of terms added together amounts to exactly four—no more, no less—and yet he will also tell you that eternity alone would suffice to write down the terms whose sum is really comprised in that insignificant number four!—an eternity of duration, and an innumerable host of ever busy writers!

Now the whole mystery and contradiction in these well known mathematical truths, arises from the presence of infinity. Expel that element and all mystery would vanish; retain it, and facts known to a school-boy are incomprehensible by a Newton. Newton admits them, uses them, knows them to be true, but cannot explain them—and never will be able to explain them, nor absolutely to comprehend them, even though his occupation in heaven were the study of mathematics and nothing else forever. It is a mistake to suppose that all mysteries will be solved hereafter; for every mystery of incapacity—which is the only real, ultimate incomprehensibility—must remain forever uncomprehended by the creature. No progress can elevate the finite into the infinite. Happy for us that this is so! Were it otherwise, a period in eternity might arrive when truth would be exhausted, and our felicity would be overclouded by a grief to which the weeping Alexander's was a childish sorrow.

THE BEST SCHOLAR.

In every school there is one who is called the best scholar. Teachers and pupils have no difficulty in deciding who is entitled to this honorable distinction, and when we once heard the pupils of a school exclaim, as a bright-eyed boy entered the room, "Here comes Frank; he is the best boy in school,"—we thought, "What a good introduction to a new teacher." After becoming acquainted with the scholars, we found that they had told the truth. Frank was the best boy in school, and will no doubt become one of the best men in the city. Think of it, boys. "The best boy in school." Who would not be proud of such a title? It is worth more than millions of dollars. But perhaps some scholars will say, "We can't all be the best." This is true, but you have a right to *try*, and the one who will try hardest will succeed, for there is power in that little word *try*. Frank could not be the best boy in his school if he did not try. If you cannot be the best, be careful and not be the worst. Every school has one boy who is worse than any other scholar. We pity him; we pity his parents, his brothers and sisters. What a disgraceful title—"The worst boy in school." He will no doubt become one of the worst men in the community. Let every boy who reads this resolve to be "the best boy in school."

PRACTICE AT THE BAR.—Whoever stoppeth at the *bar* of him who *bar*-ters distilled *bar*-ley, drawn from a *bar*-rel, *bar*-s himself from ever advancing at the *bar* of life. He will live like a *bar*-*bar*-ian—an outcast from civilized society—and his memory will be to him as a *bar*-bed arrow, when he thinks of the bad *bar*-gains he made when under the influence of *bar*-m. His *bar*-k will founder on the sand *bar*-s in the stream of life, and his life will be *bar*-ren of any good, in consequence of the *bar*-rier he has placed between himself and the world, and no *bar*-d will chant a *bar* at his de-*bar*-king.—*Merry's Museum.*

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, JUNE, 1858. NO. 6.

JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR JUNE.

"Tough thistles choked the fields and killed the corn,
And an unthrifty crop of weeds was born,
Then burs and brambles, an unbidden crew
Of graceless guests, the unhappy fields subdue;
And oats unblest, and darnel domineers,
And shoots its head above the shining ears,
So that unless the land with daily care
Is exercised, and with an iron war
Of rakes and harrows the proud foes expelled,
And birds with clamors frighted from the field;
Unless the boughs are lopped that shade the plain,
And heaven invoked with vows for fruitful rain,
On other crops you may with envy look,
And shake for food the long abandoned oak."

JUNE is a busy month. The sun shines in our latitude more hours, this month, than in any month in the year. His rays are sending their all-penetrating force into the most hidden recesses of animated nature, and under his stimulating influence, she is driving, in full tide, the life-blood through every artery and sap-vessel of every living thing. All nature is glowing with fervid life. The grain is green in the fields. The leaves upon the trees are fast attaining their full size, and every leaf, in all its vessels, is elaborating the sap from which the fruit and the growing wood are being formed. The seeds have germinated and are pushing up into the air their delicate plumules, that they may imbibe the breath of heaven, and also throwing their radicles into the soil. The blades of corn are shooting up green and succulent, and soon will come the ear, and then the, full corn in the ear. The plants in the garden are expanding their leaves and filling the soil with their rootlets, and each is struggling to secure possession of as much space as possible, for its further development. They all need watching and cherishing, and a large portion of them must be sacrificed, to make room for the remainder. It requires no small share of resolution to pull up fine, thrifty plants, to give space for those that are to remain till autumn, but it must be done, or we shall fail to find well-grown and fully-developed vegetables, in the time of harvest. Through the growing season, the soil must be kept mellow and light. The hoe and the rake must be busily plied through this month in the garden. The weeds must be kept down, or they will steal away the food of the plants. They are most unscrupulous robbers, and must be treated without mercy. It has been settled by experience extending from the time when Adam cultivated the garden of Eden, down to this time, that we cannot raise a good crop of vegetables, and a large crop of weeds, upon the same spot, at the same time. If we have fine, thrifty vegetables, we have few and meagre weeds,—or, if we get a vigorous growth of weeds, we cannot have thrifty vegetables, too.

It is the wisest course to decide early in the season which we will have, and not waste our labor in attempting to have both. This is as unwise as to try to serve God and mammon at the same time.

The *cultivator* and the *hoe* must be busy in the corn field and potato field. You will need to go over these crops twice, at least, this month. If you can sprinkle a handful of ashes, or a little plaster, or air-slaked lime on each hill before hoeing, you will find it a paying operation; and if you will have a cask or two of lime ready, and sprinkle it freely over your potatoes, about the middle of July, early in the morning, when the

vines are wet with dew, or just after a shower, you will probably do an essential service to your crop, both as regards snails and slugs and the rot.

Let your hoeing be thoroughly done. Pick out the weeds carefully from the plants, and thin them where they are too thick. It is much easier to do this when the plants are small, and it is much less injurious to them to disturb their roots when small, than when they have reached a larger growth.

Soils that have been long cultivated, and are manured with manure from the stable, will necessarily be weedy, and no inconsiderable part of our farm labor consists in eradicating the weeds from our crops. This will always be so, and we must make our arrangements accordingly. The best means that we can suggest to save labor in this matter, is never to let the weeds go to seed in the field or garden.

In the eastern and southern parts of Massachusetts, work in the hay-field will commence about the close of this month. Mowing machines are now becoming quite common, and upon many large farms, will greatly facilitate the labor of haying. We hope it will not be a long time before Yankee ingenuity will provide a light, compact machine that can easily be worked by one horse, and will be furnished at a price within the means of every farmer in New England. This will reduce the labor of haying, as well as the time occupied by it, at least one-half, and thus leave much time for the other labors of the farm, which press so urgently at this season of the year. Such a machine would meet the wants of the small farmers of the east, and would put them upon a level with the farmers of the west. In their wide fields, where horses abound, and are cheaply kept, the heavy machines now in use are of inestimable value, and have already increased the amount of the grain crop beyond all calculation. Without their aid, it would be impossible for them to secure their grain before it would spoil in the field. Necessity is the mother of invention, and now that invention has become a profession, the farmer, like the manufacturer, has but to make his wants known, and brains are immediately set to work, to devise means of meeting them.

But enough of this. We have digressed widely from the point at which we started, and have not yet expressed the thought which was in our mind when we took pen in hand.

JUNE is the most beautiful month in the year. Its breath is fragrant with the sweet odors of the flowers. The clarion notes of the birds wake the echoes of the morning. The insect tribes, the birds and the animals all wear their brightest liveries. The vegetable world is clothed in its richest garb. The fields and the forests are robed in their brightest green. Every living thing is fair and fresh, and all is full of hope. Then let us, while the sun, and all the sweet influences of the heavens, and the energies of nature around us are working for us, and cheering our labors, not be deficient in efforts for ourselves. Let us rise with the lark, and with hearts full of gratitude and cheerful hope, second and guide with skilful hands, the energies which nature is putting forth for the sustenance and happiness of all her children.

Let us work in accordance with her laws, and avail ourselves of that assistance which she is ever ready to lend to all our wisely-directed efforts, and then when the bright verdure of summer shall be replaced by the russet of autumn, when the music of the feathered songsters is hushed, and the leaves have become brown and sere, we shall rejoice with thankful hearts over the labor of our hands.

RECIPE FOR MAKING SOAP.

The following recipe for making soap is by a lady who took the premiums for a very superior article at the late Fair of the Virginia State Agricultural Society. We think it will be found good:

Have ready hickory lye, strong enough to bear an egg, *showing the size of a dime* above the surface of the lye. To three pounds of clean fat, after being melted, add two gallons of the lye and a bit of lime the size of a walnut; boil it fast, and frequently. When it has boiled an hour stir in two gallons more of the lye; continue to stir it often, and always one way. After it has boiled for several hours, take out a spoonful and cool it on a plate; if it does not jelly, add a very little water; if this cause it to jelly, add water to that in the kettle,—stir very quickly while the water is poured in, till you perceive that it ropes on the stick or becomes heavy. When this is the case, you have what is called jelly soap, (or soft soap by some.) To make it hard, stir one quart of salt into the kettle, and let it boil ten minutes longer; set it by to cool. Next day cut the soap out of the kettle and clarify it by melting it over, adding water enough barely to cover it; let it just come to a boil, and set it away. When perfectly cool and firm, turn it out of the oven, scrape off the residuum that may adhere to the cake of soap, cut it in pieces and place it on the board to harden.

To make this soap fit for toilet purposes, it is only necessary to cut it into thin shavings, place it in a very nice tin pan, add a little water, scarcely enough to cover the shavings, set it on some embers and stir and beat it with a nice spoon till it becomes a smooth jelly; while in this state, if you wish to color it, dissolve *Chinese* vermillion in a little water, and stir it in till you get the desired hue; take it off the fire, and add oil of lavender, bergamot, sassefras, or any other essential oil, the scent of which you like; and while it is somewhat liquid, pour it into moulds.

For the New England Farmer.

PATENT OFFICE REPORT FOR 1856.

I have before me the Patent Office Report for 1856, on Agriculture. The table of contents promises a rich repast, but a careful examination shows the promise scarcely fulfilled. There are, however, several highly interesting and valuable articles, and in one respect, there is a decided improvement on the past. The plates are better executed than in any former number, showing a gratifying advance in this branch of art in our country.

The plate of Peabody's Haut Bois Strawberry is beautifully done, and would do credit to any horticultural magazine.

The plates accompanying Kermicolt's report upon the quadrupeds and birds of Illinois, are highly creditable, both to the author and the artist. The whole article by Kermicolt is very valuable. It is written in a clear, intelligible style, and exhibits great industry and research, and is an important contribution to the zoology of the United States. The articles upon drainage as a means of improving land, by Henry F. French, of New Hampshire, and upon the use of muck as a fertilizer, by Simon Brown, of Massachusetts, are plain, common-sense and instructive articles, and deserve to be carefully read and inwardly digested, by every New England farmer especially. The paper upon grafting and budding, by John I. Thomas, of the State of New York, is neat and sensible, and embraces the gist of the whole subject. His descriptions are clear and comprehensible, and his directions are in general correct, and may be followed with safety. The reports of the American Pomological Society embody a good deal of valuable information, and it is to be presumed that the varieties of fruit recommended in the reports from the several States will be found well adapted to the localities where they have been cultivated. The results in fruit-growing arrived at by careful and competent experimenters, are very valuable, inasmuch as they save, to those wishing to obtain good varieties of fruit, a great amount of time and labor. The article upon grape culture, by Dr. Warden, of Ohio, contains several useful suggestions. His remarks upon the preparation of the soil, drainage, &c., are worthy of careful perusal. The crowning article in the volume is that upon meteorology and its relations to agriculture, accredited to Professor Henry, of the Smithsonian Institute.

Some 131 pages, or about one-fourth part of the volume is prepared by D. J. Browne. Mr. Browne is certainly a man of great industry; but he obviously has a high opinion of himself and his own abilities,—probably higher than his readers will entertain. His articles are prepared upon the modern plan of lectures and magazine literature. He reads up for the occasion, and selects the most striking thoughts and facts from other authors, who have written upon the subjects which he discusses. But he often shows that he has not practical knowledge enough of the subject of which he treats, to enable him to distinguish between the true and the false—between the chaff and the wheat. To be a compiler of other men's thoughts for practical use, a man should understand the subject for himself, and be able to discriminate between that which is erroneous, and that which is true. Otherwise but little reliance can be placed upon his collections.

We have already a sufficient number of school books, and agricultural books manufactured to order, for the trade, in the same way. Another objection, too, may be urged against some of these articles with propriety. In such compositions, justice would seem to require that due credit should be given to the authors consulted. In some of these articles we have statements given as original that have been before the public for years, indicating either a large share of conceit in the writer, or a low estimate of the intelligence of his readers.

We have some curiosity to know whether Mr. B. is paid by the page for the matter which purports to be original, in addition to his salary for services in the office. If he is, this will account for the large space which his articles occupy. We certainly do not object to a reasonable amount of matter from his pen. Some of his articles are very readable. He writes in an easy fluent style, and if we could feel that he knows whereof he affirms, and could rely upon his judgment, we should be satisfied. We know nothing of him except what we infer from his style, and manner of gathering his facts, and the *ex cathedra* spirit apparent in most of his articles. It is obvious that he is not to be contradicted, and that we are expected to receive his opinions as law from which there is no appeal. The modesty of real knowledge is not as apparent as could be desired. A book got up at so much cost and printed at the expense of the nation, and which purports to represent the condition of agriculture in the United States, should consist of original and carefully digested matter, in all respects accurate and reliable. The appropriation by Congress is certainly adequate to command the pens of the most intelligent and competent agriculturists in the nation. Perhaps any suspicion of favoritism in the employment of writers, or of sectionalism in the expenditure of the funds subject to the control of the bureau of agriculture, is unjust, but we confess that a feeling of this sort has sometimes crept over us, when we have looked over the contents of the volumes from this department. Yours, &c., MIDDLESEX.

For the New England Farmer.

WARWICK AGRICULTURAL SOCIETY.

MR. EDITOR:—The town of Warwick, being situated in the extreme north-eastern part of the county, and, by its location, cut off from all interest and influence in the county society, it was thought advisable to form a town society, not in the spirit of opposition to the county society, but with the view of bringing home to the minds of all our farmers the various improvements which have been made in the science of agriculture. Accordingly, in the early part of the winter, a large and flourishing society, composed principally of farmers, was formed, a constitution adopted, and preparations made for holding discussions on some of the most interesting subjects of agriculture. And though it was no part of our design to make the learned display which is made by our "Conscript Fathers" at the State House, in their discussions upon the sub-

ject, yet we did expect to receive mutual benefit and instruction, and, thus far, we have not been disappointed. The subjects which have already been discussed are the following: *The best methods of making and saving domestic manures; the best time of cutting the various kinds of grass, and the best methods of curing them; the best style of plowing the different kinds of soil.* These discussions have been held once a fortnight. It is the intention of the society to have a regular town CATTLE SHOW sometime during the autumn. The following are the officers for the present year:—Rev. John Goldsbury, President; Edward Mayo, Vice President; Samuel W. Spooner, Secretary; Joseph W. Phillips, Treasurer; Elisha M. Davis, Clark Stearns, William R. Ball, Joseph W. Green, and Jotham Lincoln, Standing Committee. JOHN GOLDSBURY.

A MORNING IN AN OLD SWAMP.

At a period when so much interest is felt in the subject of Drainage, it is important that persons engaged in the operation should not only have access to the best works on the subject, and communication with intelligent men who have given the matter thought, investigation and practical attention, but they should be referred to works going on and also in a completed state, in order to determine, by the practical efforts of others, whether it is feasible and advisable for them to embark in a similar enterprise on their own estates. For cautious and well considered movements would save farmers, as well as men in other callings, from many disastrous experiments that not only exhaust their means, but fill them afterwards with prejudices that are not well founded, and that are exceedingly difficult to be removed.

It is with this view that we give an account of *a morning visit to an old swamp*—to state where an extensive operation in drainage is now being carried on, and to suggest to those contemplating similar operations, that they may find much in this work towards settling the question whether they will embark in such an enterprise or not.

It was a windy morning in early March when Mr. J. H. SHEDD, of the firm of SHEDD & EDSON, Civil Engineers and Surveyors, Boston, took us to the pleasant town of Milton, seven miles from Boston, to look at lands now going through the process of being underdrained, and belonging to Messrs. *John A. Cunningham* and *John M. Forbes*, both Boston merchants, but who have an eye for the useful and beautiful in country life.

The tract on which the drains are located is considerably elevated above that immediately north of it, and in this direction, and by means of this elevation, the necessary fall for the main drain is obtained. The east and west sides are flanked by hills, and terminating in somewhat extensive plains or table land.

The surface and the soil through which the drains pass are quite variable; sometimes presenting a level surface, with a rich black soil, at others undulating, and presenting below, stones, rocks, gravel, clays, in one instance a quick-sand about as ready to find its level as water itself, and below most of these a hard-pan subsoil.

This interval, or space between the hills, was formerly covered during a greater part of the year with stagnant water, supplied from the hills, acting as reservoirs, on either side. But being well wooded with a rich growth of young oaks, maples and elms, the project was conceived of converting it into a park or pleasure ground, by the permanent removal of the water, and reducing the soil to a state of dryness and solidity; and by the construction of avenues, and the introduction of such other features as might be desirable.

The *trench for the main drain* is 1450 feet in length, about 4¼ feet in depth, and 3½ feet wide at top, by 3 feet at the bottom. The least fall in any portion of the drain is three-tenths of a foot in a hundred feet.

The *lateral drains* on the easterly side of the main are ten in number, with an aggregate length of 1900 feet, their average length being 190 feet. These drains were laid out at distances 60 feet apart, are on the line of half-rise with the steepest ascent, and their ends run well into the hills.

The tract to be drained has very properly been made into two divisions, as the condition of the surface naturally requires two main drains to lead off the water from the laterals. It ought to be stated, too, that there was a small, natural, sinuous water-course flowing through both divisions. The length of the mains and the laterals passing into the brook are as follows:

1st division, main drain	1450 feet.
1st division, laterals	1900 "
2nd division, main drain	550 "
2nd division, laterals	1050 "
Brook	1550 "
Laterals into brook	1700 "
Total	8200 feet.

The sinuous water course has been excavated and its stream so much increased in volume as to become dignified into a rapid and pleasant brook, adding greatly to the appearance of what will now rapidly assume the appearance of a clear and wholesome park!

The tract of land now drained has long been abandoned to stagnant water, lily pads, frogs, lizards and water brush, and was a fair sample of those *dismal swamps* which abound in nearly every portion of New England. Now the surface presented is extremely uneven, and abounds with a mass of decaying vegetation, black, slimy and disagreeable, where hassocks, rotten roots, and masses of leaves and brakes may become active agents in fertilizing and rearing more useful and agreeable plants.

For the New England Farmer.

THINGS BY THE WAYSIDE—No. 5.

"TREES BESIDE THE WALL."

This is a good suggestion of yours, Mr. Editor, and deserves an extensive investigation. That trees having roots under stone walls, or a large rock, thrive better than those out in an open field where the scythe passes close to the soil over the roots annually, is quite evident to the careful observer. The earth under a large stone, a collection of small stones or a stone wall, is always light and mellow, easily penetrated by the surface roots near the top of the ground, seeking light, heat and moisture, and sustains a remarkably *uniform* degree of temperature both summer and winter. Hundreds of fruit trees are annually killed by drought in summer, and frost in winter. Neither heat or cold will destroy fruit trees in a healthy condition if the *roots* are properly protected. Three years ago last summer I lost a beautiful Seckle pear tree by drought. Since then I have carefully guarded against both drought and frost by mulching, the practice usually adopted by nursery-men and fruit-growers. I have no doubt but a body of stones covering the whole surface under the tree would be much better, especially old trees. I have noticed inquiries in your paper concerning the cracking of fruit trees in winter. This probably is occasioned by the pressure of sap to the top of the tree, by freezing of the roots. So far as my observations have extended, thrifty and rapid growing trees are the first to suffer in this way.

CORN AND POTATOES—PROFITS.

Indian corn is recommended by a large majority of writers in New England as our most profitable field crop. This runs counter to my experience, and I beg to differ. Last summer I planted three-fourths of an acre of light sandy loam to corn, and one-fourth to potatoes in the same field. Fourteen loads of unfermented manure per acre was the amount used, the poorest portion being reserved for the potatoes. Fifteen bushels of shelled corn and forty-five bushels of potatoes was the crop raised. The corn was worth one dollar, and the potatoes fifty cents per bushel. By planting the three-fourths of an acre in corn to potatoes, I should have realized four times as much in value at less expense. This agrees with my experience and observations for the last three years, and I think will satisfy any person who will look at the price of potatoes for several years past at New York and Boston quotations. I believe light sandy soils are the best for potatoes in these times of rot. High manuring, for the last few years, has proved quite injurious.

CARROTS AND RUTA BAGAS.

A strong desire to possess information upon this point of agricultural intelligence, has led me to inquire into the experiments and results of many of my neighbors, who are engaged in this and many other experiments of a kindred nature; and I find a large majority of those I have consulted to be strongly in favor of raising ruta bagas in preference to carrots, for three leading reasons.

1. A much larger crop can be grown upon the same breadth of land, manure, quality of soil and every thing else being equal.

2. They can be grown at much less expense, as they can be grown in drills, or sown broadcast among corn; and I find it very convenient when sown among corn to sow the seed upon the manure heap before spreading or laying out into hills.

3. Nearly all kinds of stock relish them much better than they do carrots, they sell more readily in market as a garden sauce, and command a higher price.

SEASONING WOOD

for home consumption or for the market is a very important branch of business among farmers at this time, and any information upon this subject seems to me to be of importance. Wood prepared for the stove or open fire while green, corded up in the open air, say two or three months, then securely packed up under cover, is much more valuable than when cured in the condition of four feet, or cord wood. Many kinds of wood, birch in particular, spalt badly unless prepared for the fire while green. To avoid this, when cording up wood for the market or home consumption, pile it with the *bark up*.

L. L. PIERCE.

East Jaffrey, N. H., March, 1858.

THINNING OUT VEGETABLES.

It was Cobbitt, we think, that remarked, when speaking of the ill effect of thick planting, that one cucumber plant in a hill would bear more fruit than two, two more than four, and so on, and if there were fifty plants in a hill, the whole of them put together bear no cucumbers at all! The truth is, there is a much greater loss in allowing vegetables to stand thickly together than most are at all aware of. To insure a crop, plenty of seed is sown, with the intention of thinning at the proper time; but when thinning day arrives is requires rather more nerve to commit what appears to be the merciless havoc of tearing out nine-tenths of the beautifully growing young plants, than most people possess. A crop of beets has just commenced forming handsome bulbs, precisely one inch asunder in the row; certainly something of the surgeon's temper is needed to lay nine-tenths of these withering in the sun; cucumbers are just beginning to throw out their yellow blossoms, and it seems to some a hard matter to tear out three-fourths of the dozen now growing in the hill. It must, however, be done—all the surplus plants in a bed of beets or turnips, or a hill of cucumbers, squashes or melons are to be regarded as so many positive, downright *weeds*, obstructing the growth of the rest, and yielding but little or nothing themselves. If our crops are to be crowded and stunted, we would quite as willingly have it done with pig-weeds and fox-tail, as to have them smothered and the soil exhausted by seeds of their own species.

Many years ago, when the cultivation of the rutabaga was first introduced, we could invariably distinguish the crops of the novice by the thickly-growing, half-developed bulbs. "O! but they had thinned them to a very great extent—they had cut out three-fourths, and reduced them from one inch to four inches in distance," whereas none should ever stand nearer than a foot to each

other, if the soil possesses anything like a fair degree of fertility; but this looked like indiscriminate slaughter, and could not be thought of for a moment. The finest specimens of garden products, which we see exhibited at horticultural shows, are those which have been well thinned and allowed every opportunity to develop themselves freely; and the same is true of ornamental plants, where a full, rich and luxuriant growth and bloom are obtained through the adoption of the same principle.—*Country Gentleman.*

THE INTERIOR OF NORTH AMERICA.

Prof. Henry, of the Smithsonian Institution, has collected facts representing the interior of the United States, which will command the attention of scientific men and statesmen. The induction from these facts is, that the entire region of the United States west of the 98th degree west longitude, (say the western boundary of Minnesota,) with the exception of a small portion of Western Texas and the narrow border along the Pacific, (including California,) *is a sterile waste of comparatively little value*, and which can never be available to the agriculturist. The importance of this statement will be more fully comprehended when it is considered that the line of Prof. Henry, which extends southward from Lake Winnipeg to the Mexican Gulf, will divide the surface of the United States into two nearly equal parts.

The intense heat and extreme dryness of this region, which will make the Great American Plains a barren waste forever, is caused to a large extent, according to Prof. Henry's theory, by the fact that the returning Trade Winds, sweeping over the elevated masses of the Rocky Mountains, are deprived of their moisture; in other words, the heated air which ascends at the equator, saturated with moisture it has extracted in its passage over the ocean, after depositing a portion of its vapor in the tropics at the rainy seasons, is further dessicated by the ridges and mountains which it meets, the vapor being condensed on the windward side by the cold due to the increased vertical height, and it finally passes over and strikes the plains as dry as a sponge which has been thoroughly squeezed. Without moisture there can be no fertility, no agriculture; and a great portion of this wilderness, according to Prof. Henry, is as irredeemably barren, for the purposes of agriculture, as the deserts of Africa. If this theory be true, it will greatly modify the opinions which have been entertained by politicians and statesmen of the future destiny of the "Great West."

SOAP SUDS FOR CURRANT BUSHES.—A correspondent of the *Indiana Farmer* says: "I have found the cultivation of currants to be very profitable. By care and attention I greatly increased the size of the bushes and the quality of the fruit. My bushes are now about six or eight feet in height, and are remarkably thrifty. The cause of this large growth I attribute, in a great measure, to the fact that I have been in the habit of pouring soap-suds and chamber-ley around their roots during the summer season. I am satisfied, from my own experience and that of some of my neighbors, that the treatment will produce a most astonishing effect upon the growth and product of the bushes, and would advise others to give it a trial."

For the New England Farmer

TALES OF A TRAVELLER.

Somebody who signs "Far East" in the last weekly *Farmer*, and whose knowledge seems to exceed his faith, seems disturbed at my seeing white pines and hemlocks in the neighborhood of Baden-Baden, and thinks the discovery "will create quite an uproar amongst the botanists." He says truly that the trees in question "are held to be natives of the new world only." Indian corn and tobacco are held to be natives of the new world only, but fields of them are growing all along in Germany. I am myself a native of the new world, and yet there are many who would testify that they saw me in Europe last summer.

But as to the white pines near Baden-Baden. On the 3d day of August last I walked out with three friends from Canada, up a short, steep hill, close by that city of fashion and folly. I was struck at finding myself among white pine trees, which extended over many acres, covering the steep side hill so far that I could not see their termination. They looked thrifty, and as if they might have had forty or fifty years' growth, and the ground beneath them was covered with their leaves. I was as much surprised at the sight as our "Far East" friend is at the statement, and while my companions reposed on the grass, I wandered off to find a branch low enough to examine, and finally returned with a handful of twigs, and explained to them my botanical notions. They were white pines, as we all knew, though we were as much surprised at meeting them as they were at meeting us, so far from home. The hemlocks I saw at the "old castle," six miles, I think, from the watering-place. There is a heavy forest close about the ruins, and large trees growing up inside the walls, indicating the great antiquity of the structure. I took one of my friends back a long way to convince him that there were large maples growing there. The woods look as wild as a New Hampshire mountain, and we spoke of the remarkable variety of forest trees, as we looked down upon them from the towering old walls. As to how our native trees came there, history is by no means silent. Loudon, in his Arboretum, vol. 1, p. 147, says:

"The margraves of Baden have, from the earliest ages, been much attached to planting and gardening. The worthy old margrave Charles, who died about 1805, and one of his sons yet alive, may be reckoned amongst the most zealous promoters of the planting of foreign trees and shrubs, in proof of which we need only refer to the parks at Carlsruhe, Schwetzingen, Mannheim and *Baden-Baden*."

The same author says the planting of the castle garden at Heidelberg was begun in 1615, and "at Haroke, near Helmstadt, there is a very interesting garden laid out in different scenes, which are called Canada, Virginia, &c., from the native countries of the trees planted in them."

It need not surprise us that our forest trees of full growth are found all over Europe. The white pine (*pinus strobus,*) was introduced into Kent, in England, so early that the trees "began to bear cones with perfect seeds," says Loudon, "about 1720." Perhaps my expression was not precisely accurate when I said that the white pine is found near Baden "in its natural growth." I meant that it grew as it naturally grows, not that it was a tree that was originally found there. I presume the pines I had in mind were grown from the seed artificially planted, and that the present forest about the old castle sprang up from the seeds and sprouts of those planted there centuries ago. At all events I defy Nature herself to make a more "natural growth" than may be seen there now.

I hope no Down Easter will hold up to view the spelling of some of the proper names in my letter from Lyons in the April number. It gave me a profitable admonition to write plainer in future, especially when dealing in the names of French and German places. H. F. FRENCH.

April 3, 1858.

For the New England Farmer.

CULTURE OF MAIZE OR INDIAN CORN.

It is refreshing, in these days of visionary speculation, to find such salutary instructions as have lately appeared on this subject in that truly sensible journal, the *Country Gentleman*. While one is hunting the arid sands of Africa for *Imphee*, and another is importing his *Sorghum* (for sugar) from China—the substantial farmer from the granite hills of New Hampshire tells how we may prosper best by cultivating our own *Indian Corn*. This plant we know, and have known it ever since our sires first rested on the sands of Plymouth, where it is still cultivated as successfully as anywhere we know. It is easy to demonstrate that a *net profit of fifty dollars an acre* can be realized annually by the growing of this crop. Any farmer possessing one hundred acres, can find the means of cultivating *ten acres* of corn, and hence an income of $500. The remainder of his land will meet other expenses of the family and farm; and let this course of industry be followed for *ten years*, he will have the means of paying for his land, and settling down truly independent. ***

April, 1858.

WHAT AN INDUSTRIOUS MAN CAN DO.—What an industrious man can do in a single year as a farmer on our soil, is sufficiently explained by what Mr. S. P. Scofield, of the town of Russ, in this county, has done since last March. He commenced by splitting rails enough to make three-fourths of a mile of fence, all of which fence was in due time made. He gathered last harvest—295 bushels of wheat; 150 bushels of corn; 140 bushels of oats; 90 bushels of buckwheat; 85 bushels of potatoes; 50 bushels of turnips. Mrs. Scofield, in the meantime, made 250 pounds of butter from the milk of four cows, from which we infer that she is not herself afraid of work. Mr. Scofield has labored the whole season under the disadvantage of having no team of his own. This deficiency he supplied by "changing work" with a neighbor—he himself working one day for the use of the team another day.—*Galena Advertiser.*

EXTRACTS AND REPLIES.

MOWING MACHINES.

MR. EDITOR:—I have heard so much said about this class of implements, that I sought the abstract of returns from the several societies, to learn which was best to be purchased. But to my astonishment, I found there only *three* spoken of—and these in a manner that I could not decide which was to be preferred. Allen's, Manny's and Ketchum's are the machines mentioned. All of these appear to have done good work—but each and all of them are open to exceptions. Is it not time that our farmers should be informed of an implement unexceptionable in its character? We do not expect this information from the makers and venders themselves, because they have too much interest in their own wares *not to puff them.* But we do expect it from those who are clothed with the authority of the State,—and we think it is their duty to be fully advised in these matters, and to lose no time in giving reliable information to their constituents. *

April, 1858.

REMARKS.—We think our correspondent, *, is asking too much; there is no mowing machine in existence, probably, which is "unexceptionable in its character"—that is, so perfect that no fault can reasonably be found in it. Is it not quite likely that "those who are clothed with the authority of the State," may entertain different views of the merits of the several machines, as well as others?

We can see no other way than for farmers to test them for themselves, and then compare the opinions made up from such tests. There were several machines used in this State last year which worked well: Manny's, Ketchum's and Allen's were in general use, and we have great confidence that the Heath Machine, to which was awarded the thousand dollar premium, is to take a high stand among them all. Some errors in the construction have been corrected, and it is now ready for the public, manufactured with great care, and preserving the plan of the original machine.

GUTTA PERCHA PIPE.

Can you or any of your correspondents inform me where gutta percha pipe can be obtained, and at what price per foot for ⅝ or ¼ inch hole, and if

it is healthy to use the water passing through it? Also, if it is cheaper than lead pipe, and whether it must be laid in logs or without? Will it bear the pressure that ten ounces lead pipe per foot will? W. J. SMITH.

Ludlow, Vt., 1858.

REMARKS.—Gutta percha pipe of any size and in any quantity may be obtained of Charles Stodder, 75 Kilby Street, Boston. It costs about the same as lead pipe; does not affect the water, and need not be laid in logs. Cannot tell you about the pressure it will bear.

—

SHAKER GRAFTING CEMENT.

I have forwarded you a few pounds of grafting cement, and wish you to give it a trial.

It is composed of such ingredients as make it the best article for grafting in its various forms now in use. It is perfectly pliable at a proper temperature of the weather, and may be spread upon the cut surface of the grafted stalk, with the most perfect ease, with the fingers, by touching them to a little tallow, which all grafters usually have with them. The greatest heat of the sun will not cause it to run off the stalk, neither will it crack or pull of, as most other cements do the second year.

I have used this cement more than twenty years, and have yet seen nothing of the kind that will equal it. Others who have used it, acknowledge it to be the best article in their knowledge. I call it Shaker Grafting Cement.

PETER A. FOSTER.

Shaker Village, Merrimac Co., N. H.

REMARKS.—Thank you, Sir. We shall try your "Shaker Grafting Cement" in a few days, and if it proves good, we will tell the "world's people" so.

—

LAMP OIL.

To Remove Lamp Oil from Cotton and Woolen Goods.—Rub in thoroughly with the hand some clean, fresh lard, let it remain for two or three hours, then apply soft soap, and wash in warm water. This can be depended on.

MILCH COWS.

Can you inform me if a book entitled, I think, "Guenon's Cow Book," is in print now, and where it can be obtained? The book contained, what was claimed to be, a discovery made by Mr. Guenon, a Frenchman, of a never-failing means of ascertaining the milking properties of cows by the direction of the growth of the hair upon the rump of the animal. It was transcribed entire to the pages of the *Monthly Journal of Agriculture*, published by Greeley & McElrath, New York. B. F. M.

Lowell, Mass., April 12th, 1858.

REMARKS.—The book you inquire for may be found at this office, as well as all the best works on agricultural and horticultural subjects. The pamphlet edition of Guenon costs 37½ cents.

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TURKEYS—HOW TO RAISE?

Some few months since I noticed in your paper an article stating that sixty-six turkeys had been raised from two or three hen turkeys. I would like to inquire in regard to the feeding and other care bestowed, by which such a fortunate result was obtained. In this vicinity many of our farmers find it extremely difficult to raise even a small number of this valuable fowl.

Gloucester, April. 1858. G. H. PROCTER.

—

CURE FOR CHILBLAINS.

Take a saucer full of beef brine, and if it be cold weather, warm it a little; then take a flannel cloth and dip it into the brine, rub it on and dry it in, and a few applications will entirely remove the chilblains. L. F. D.

—

A SICK HEIFER.

I have a two-year old heifer which has been troubled since a few months old with a constant running at the eyes. Will you or some of your numerous correspondents please inform me the cause and remedy, and oblige,

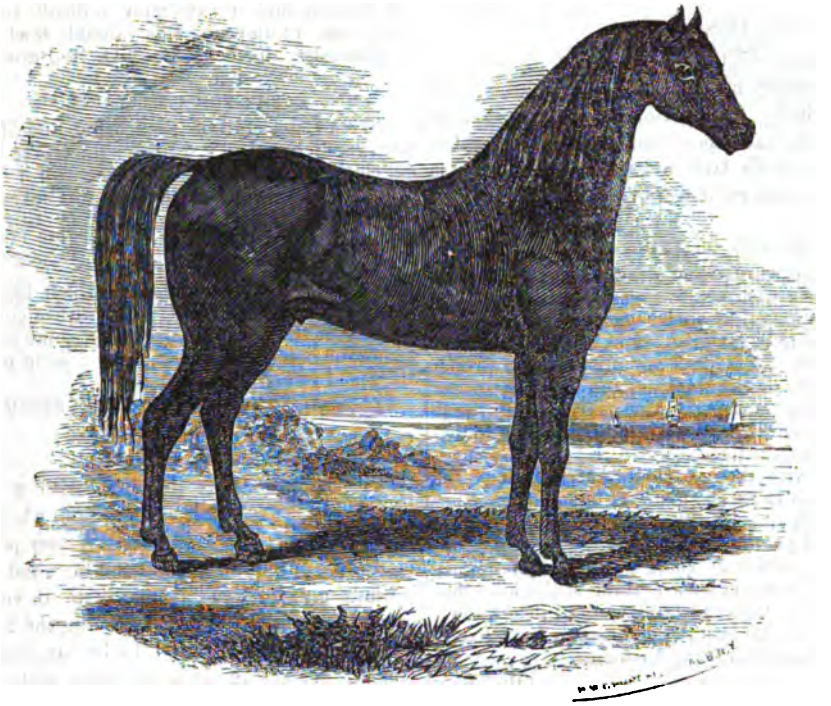
Freetown, April, 1858. A SUBSCRIBER.

WHEAT STRAW.

Last season we were presented with a specimen of wheat straw for examination, which had grown on a piece of land formerly very productive in this species of grain, but which had failed to produce it for some years, except in very diminished quantities. On examining the texture of the straw, it was found to be lax, and very "flabby," something like a towstring, without solidity or strength. The cause of this was at once apparent. The soluble silex of the soil necessary to the production of a firm, glossy straw, had been exhausted by the previous crops, and the present one had failed from want of a supply. No wheat can be produced where this mineral ingredient does not exist. It is still more difficult to grow barley where there is not considerable sand or gravel.

Land for wheat should not be made very rich; if it is, there will be a great growth of long, coarse straw, which will be quite likely to fall before the berry is formed, and the crop fails. There is little danger of this in the Indian corn crop—it will bear almost any amount of manure. Where it is intended to lay land to grass with wheat, it is best to manure rather lightly for the wheat, if the land is in tolerably good condition, and add the fine manure to the young grass immediately after the wheat is harvested.

THE BORER.—Mr. TRAVIS, of Natick, states that a mixture of one part salt, two parts fresh slaked lime, and two parts soft soap, applied to the lower limbs and the body of the apple tree, after first scraping the tree gently, will prevent the borer from depositing its eggs in the bark. It should be applied about the middle of April. He states that the success of this remedy is complete.



A FINE MORGAN,—TOM HOWARD.

Every body loves a good horse,—and when holding the ribbons behind one possessing the symmetry and spirit of the one presented in our engraving, it inspires us with a feeling kindred to that which the eagle seems to possess, of going where we will without restraint or fear of fatigue.

For beauty of form, and power of endurance, added to gentleness and graceful activity, probably no breed of horses in the world surpasses the Morgans. When well treated, they are kind in every harness, and in the hands of those who are willing to take some pains with them, will soon learn so much of the road or the farm, as to show a surprising degree of intelligence. The Morgans are seldom vicious, are strong, compact, sure-footed, and weigh about ten hundred, varying both below and above that size occasionally.

A friend whose knowledge of horses is scarcely surpassed by that of any person in New England, told us the other day that his father long owned a Morgan horse that he frequently drove from Brattleboro', Vt., to Hartford, Conn., 80 miles, in one day, attached to a chaise containing two persons, and that he did this service handsomely after he was 24 years old!

As roadsters, coach or stage horses, they can scarcely be equalled, while they are rarely excelled in fleetness by any other breed on the turf.

R. B. Westover, Esq., of Castleton, Vt., the owner, says that Tom Howard, the subject of our cut, was sired by the celebrated Black Hawk, formerly owned by David Hill, of Bridport, Addison county, Vt., (now dead,) widely known as the sire of Ethan Allen, Lancet, Black Hawk Maid, Bill of Saratoga, Black Ralph, Lady Litchfield, and other famous trotting horses, and as being the parental head of this most distinguished family of Morgans. Tom Howard's dam was the noted Henry Mare, sired by Barney's Henry G. D. Queen Bess, sired by Sherman Morgan, Barney's Henry by Allen's Young Signal, he by old Imported Signal; his clean, lean head, his broad forehead, bold, full and prominent eyes, delicate ears and flat, clean limbs, give unmistakable evidence of a large infusion of superior blood.

Tom Howard is a beautiful raven-black, not a white hair on him, stands 16¼ hands high, weighs 1250 pounds, and will be 7 years old the 20th of June. For style, symmetry and action, he cannot be surpassed; is a splendid stepper; his colts

are justly celebrated for speed, bottom and good temper, and are eagerly sought after, commanding prices from $200 to $2,500, according to age.

BEAUTIFUL HANDS.

As a young friend was standing with us noticing the pedestrians on the sidewalk, a very stylish and elegant girl passed us. "What beautiful hands Miss —— has!" exclaimed our friend.

"What makes them beautiful?"

"Why, they are small, white, soft and exquisitely shaped. The fingers taper down most delicately, and there is a roseate blush on the finger-nails that no artist could imitate."

"Is that all that constitutes the beauty of the hand? Is not something more to be included in your catalogue of beauty which you have not enumerated to make the hand desirable?"

"What more would you have?"

"Are they *charitable* hands? Have they ever fed the poor? Have they ever carried the necessities of life to the widow and the orphan? Has their soft touch ever soothed the irritation of sickness, and calmed the agonies of pain? Do the poor bless those rosy-tipped fingers as their wants are supplied by them?

"Are they *useful* hands? Have they been taught that the world is not a playground, or a theatre of display, or a mere lounging place? Do those delicate hands ever labor? Are they ever employed about the domestic duties of life —the homely, ordinary employments of the household? Or does the owner leave all that to her mother, while she nourishes her delicate hands in idleness?

"Are they *modest* hands? Will they perform their charities or their duties without vanity? Or do they pander to the pride of their owner by their delicacy and beauty? Does she think more of their display than of the improvement of her intellect and character? Had she rather be called 'the girl with the beautiful hands' than to receive any other praise for excellency of conduct or character?

"Are they *humble* hands? Will their owner extend them to grasp the hard hand of that old schoolfellow, who sat at the same desk with her and on the same recitation bench, but who now must earn her living by her labor? Or will they remain concealed, in their exclusiveness, in her aristocratic muff, as she sweeps by her former companion?

"Are they *religious* hands? Are they ever clasped in prayer or elevated in praise? Does she remember the God who has made her to differ from so many of her sex, and devote her mind, her heart, her *hands*, to his service? Does she try to imitate her Saviour by going about doing good? Or are her hands too delicate, too beautiful to be employed in good works?

"These are qualities that make the hand a beautiful one, in my estimation. There is an amaranthine loveliness in such hands superior to the tapering slenderness of the fingers or the roseate hue of the nails."

"Poh, poh, you treat this subject too seriously. Besides, you forget the most valuable particular to a young man like me. *Will she cheerfully give me that hand to keep?*"—*Hartford Courant.*

For the New England Farmer.

HOW DEEP SHALL WE PLOW?

Who can answer this question? the first that arises on going into the field to cultivate. Shall it be four or twelve inches deep? or any intermediate quantity? It would seem, as all plants that grow make use of twelve inches or more of soil, that it should be stirred to this depth, if practicable. The best cultivators I know, adopt this practice. Those who plow less depth than this have more regard to ease of labor than profits of crops. I am quite well assured, that no one can grow a fair crop of Indian corn, wheat or barley, on shallow culture. Some are afraid to start the hard pan or subsoil, through fear of turning up a barren or unproductive substance. This is because they do not understand their business. The best way of guarding against drought, the chief bugbear of New England culture, is to plow deep and fertilize liberally; taking care to save manure from evaporation, by intermingling or covering it with soil. I am not unmindful that no general rule can be prescribed that will be suited to all soils and to all crops; but still I think there are some principles, which are applicable, to some extent, to all crops.—Among these, I believe, complete pulverizations of the soil and complete intermingling of the manure will be found conspicuous. I have never known any crops to be prejudiced by this being done; but have often known them to suffer for the want of these operations. If cultivators would be vigilant in thus applying their energies, they would find their reward, in seasons of harvest. I have personal knowledge of a farm, where the soil was considered very gravelly and unproductive. On this farm, within ten years last past, deep plowing, say from nine to twelve inches, has generally been introduced. The consequence has been, crops have been grown equal to those on the best farms around. Whether deep plowing was the cause or not, I will leave for others to say.

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April, 1858.

MR. MORRILL'S LAND BILL.—The Washington correspondent of the Philadelphia *Enquirer* says of the new bill giving lands to the States for agricultural and mechanical purposes:

"The entire amount thus given to the States exceeds six millions of acres. Instead of being apportioned according to the various areas in acres or square miles, it is distributed on the basis of Congressional representation, allowing 20,000 acres for each Senator and Representative in Congress. The result is that the largest States sometimes gets the smallest quantity of land. The distribution will be as follows: New York, 700,000 acres; Pennsylvania, 540,000; Ohio, 460,000; Virginia, 300,000; Massachusetts and Indiana, 260,000 each; Kentucky and Tennessee, 240,000 each; Illinois, 220,000; North Carolina and Georgia 200,000 each; New Jersey and Mississippi, 140,000 each; Connecticut, Louisiana and Michigan, 120,000 each; New Hampshire, Vermont and Wisconsin, 100,000 each; Rhode Island, Arkansas, Texas, Iowa and California, 80,000 each; and Delaware and Florida, 60,000 each."

For the New England Farmer.

NEW ENGLAND AND THE WEST.

How the New England farmer can successfully compete with the Western planter, is a serious question. Upon its truthful answer depend the enterprise and thrift of many New England men. Let it once be settled, that the prairie farmer has the pecuniary advantage in the agricultural yoke, and the right arm of New England industry is paralized. On the contrary, let it be proved by facts, that economy, industry and intelligence are all that is requisite to make the Eastern States the equal of other sections of the country, and New England will become what she of right ought to be, the garden of America, the Eden of the world. Her rough and sterile soil will become polished and fruitful. Her unsightly rocks will either sink into her bosom, or rise in palaces of marble. Her frozen lakes, so useless at home, will equalize both the temperature and the commerce of other zones. "Her hills will be covered with flocks and her valleys clothed with corn." Success is ever the key of enterprise. I propose to suggest some of the ways of obtaining this success.

1. The New England farmer should carefully save his fertilizers. Circumstances alter cases, is an old adage. In New England, land is comparatively scarce and sterile. At the West, it is abundant and fruitful. Here, crops are only raised with care and toil. There, with ease and negligence. Here, manure is bought with money. There, they pay something to get rid of it. If it shall ever prove true, that the more manure, the greater the crop, then it will be easy to show that the more manure, the more successful the farmer. Indeed, experience proves, that without manures, the New England farmer can do nothing. They constitute not only the body, but the *soul*, of our farming. Therefore I repeat it, *carefully save all your fertilizers.*

2. Be ready to adopt the improved methods of cultivation. We hear much said about high cultivation and improved implements, but the progressive farmer, should know their meaning by sight and feeling as well as sound. Faith without works is as contemptible in agriculture as in religion. He that makes two spires of grass grow where one grew before, is accounted a public benefactor. No man of common intelligence will say that the capabilities of our soil have been fully tested. Neither is it literally true, that land is scarce in New England. Not one-third of her ground has been cultivated or improved. If all the land in the six Eastern States was equally distributed to its inhabitants, every man, woman and child would possess nearly forty acres. In the good time coming, when every acre shall sustain its man, a vast amount of produce will be sold to somebody. Our position gives us the advantage of our Western brethren. We are nearer the sea-board and the great marts of trade. It will cost us less for the transportation of our produce. This *transportation* will always be a cash article. This *cash* must necessarily be deducted from the profits of agriculture. This *profit*, saved by the New England farmer, will purchase many of the luxuries of life, that the Western farmer cannot afford to enjoy. Rye, corn, potatoes, butter, eggs, beef, pork, veal and poultry, things which almost every farm can spare, are here usually cashed at sight.

There are some men that affect to pity the eastern farmer, because he has to contend with a rugged soil, in a vigorous climate. Such men seem to forget the old proverb, "that nothing valuable is obtained without labor." It is glory enough to live in New England, even if we work hard for it. Besides, no man can expect success in any business without industry. "Employment makes a people happy," said the immortal Webster. To attain the highest success the farmer must attend closely to his business. He must use caution on the one hand, and energy on the other. He must never put off till to-morrow, that which should be done to-day. He must be prophet enough to anticipate, at least, one day's work ahead. In short he must be *wide awake.*

3. Be intelligent. The time was, when the strongest man was the best farmer. To knock down a bullock with the fist was a crowning qualification. But times are changed. Brains are fast taking the place of brute force, and mind is displacing matter, otherwise the ox would be more skilful than the man. To sustain the well-earned reputation of our ancestors, we must increase our intelligence. New England is foremost in all things else—let her be in this. We must read more, attend farmer's clubs, exchange opinions, compare notes, learn different practices, ask counsel, take advice, draw conclusions, but finally trust in our own judgment. There are some men who condemn book farming indiscriminately. They try a single theory, and if it does not work well, they reject all other theories. With a serious air, they tell us, that "*practice* alone brings success." Such reasoning answers for old men better than for young America. The fault is not so much in the theory, as in the judgment. All the theories in the world will not hurt men who use judgment. The mind must work. Intelligence is the price of the highest agricultural success. JAMES NEWTON BAGG.

West Springfield, 1858.

For the New England Farmer.

ON KILLING ROBINS.

MR. EDITOR:—We have a good many cherry trees on our place; among them is one whose fruit ripens very early. For the last two years we have had hardly a cherry from this tree, on account of the ravages made by the robins. As soon as one began to ripen it was sure to be pecked. This work went on, until every one worth pecking was pecked; doubtless, greatly to the delight of the birds, but very little to us. So with the later kinds; the largest and fairest of the fruit was plucked or mangled so as to be unfit for use.

I think it will be justifiable, on the ground of self-defence, to use a little shot among our troublesome visitors this year.

It is doubtless true, as Mr. Flagg says, that the robins destroy vast numbers of earth-worms before the fruits are ripe enough to furnish them food; but if it appears that they are of less benefit in this respect, than they are of injury in destroying our fruit, shall we not be justified in carrying the war into the enemy's country? By vir-

tue of the dominion given him over birds, beasts and fishes, man may use these creatures in the way that will benefit him most. It is no more wrong to kill an ox for food, than it is to compel him to draw a burden. Every one will allow there is no wrong in killing a turkey or a chicken for food; and what wrong is there in killing a dozen robins for food? None, because the end in view is a useful one. So when these, or any other birds, or animals of any other kind, become so numerous as to be of positive injury to us, we do no wrong in killing them, because by so doing we find ourselves better off than we should be, if we suffered them to live—in other words, because our object is a useful one.

It is pleasing to see the sprightly redbreast hopping along the ground, or skipping among the branches, and it is still more pleasing to hear him at daybreak pouring forth his rich notes with so much animation, but if we are to have these gratifications only at the expense of our cherries, peaches and strawberries, it may be well to inquire whether we are not giving more than we are receiving? J. B. B.

Concord, April 16th, 1858.

HOW DROUGHT BENEFITS THE SOIL.

That a season of extreme drought—so often occurring and so injurious to our summer crops—should still prove beneficial to the soil, seems strange, but chemical science shows that droughts are one of the material causes to restore the constituents of crops and renovate cultivated soil.

Mineral matter is taken from the soil by the crops grown upon it, and also carried away by the surface water flowing into streams, and thence carried to the sea. These two causes, always in operation, unless counteracted by other influences, would in time render the earth a barren waste. The diminution which arises from the first cause is in part restored by manures, but not in all cases, and Providence has provided a way of its own to supply lost mineral constituents needed in the growth of plants. At intervals, droughts occur to bring up from the deep parts of the earth food for the use of plants when the rains shall again fall.

The manner in which droughts exercise their beneficial influence is as follows: during dry weather a continual evaporation of water takes place from the surface of the earth, which is not supplied by any from the clouds. The evaporation from the surface creates a vacuum (as far as the water is concerned) which is at once filled by water rising up from the subsoil; the water from the subsoil is replaced from the next below, and in this manner the circulation of water in the earth is the reverse of that which takes place in wet weather. This progress to the surface of the water in the earth manifests itself strikingly in the drying up of springs and wells, and streams which are supported by springs.

It is not, however, only the water which is brought to the surface of the earth, but also all the water holds in solution. These substances are salts of lime and magnesia, of potash and soda, and indeed whatever the soil or top strata of the earth may contain. The water on reaching the surface, is evaporated, and leaves behind in the soil its mineral salts, the chief of which are lime, magnesia, phosphate of lime, sulphate of lime, carbonate and silicate of potash and soda, and also common salt—all indispensable to the growth of the vegetable products of the farm. Pure rain water, as it falls, will dissolve but a very small portion of some of these substances, but when it sinks into the earth it then becomes strongly imbued with carbonic acid from the decomposition of vegetable matter in the soil, and thus acquires the property of readily dissolving minerals, on which it before could have very little influence.

Several experiments tried by Professor Higgins go to show this action of drought in bringing matters to the surface of the soil. In one case he placed a solution of chloride of basium in the bottom of a glass cylinder, and then filled it with dry soil. After long exposure to the rays of the sun, the surface of the soil was tested with sulphuric acid, and gave a copious precipitate of sulphate of baryta. Chloride of lime, sulphate of soda and carbonate of potash were experimented upon in like manner; and upon the application of proper tests, the surface of the soil showed their presence in large quantities, drawn up the rising of water from underneath, as in the case of drought.

The parched earth, every green thing dwarfed in growth or withered by long continued heat, seems suffering under an afflictive dispensation of Providence, yet we should not murmur; it is a blessing in disguise. The early and the latter rain may produce at once abundant crops, but dry weather is needed to bring to the surface food for future harvests from the depths of the earth, where else it would lie forever unemployed. It is a needed means of keeping up the fertility of the cultivated soil.—*California Farmer.*

For the New England Farmer.

CUTTING BUSHES IN PASTURES.

MR. EDITOR:—I feel inclined to say a few words in answer to "Bush Whacker," about destroying brush in pastures that are too rough and stony to plow. I think that the best method is to follow his occupation closely and keep whacking them, and cut close, i. e., keep mowing them, not once in two or three years, as is the too common practice, but at least once every year, and even twice a year, if they grow tall enough to get hold of them with the scythe.

Bushes, in common with all vegetation, draw a share of their support from the atmosphere through their foliage, and if constantly deprived of their foliage, and consequently of their atmospheric support, they will soon die. There is work in this, I know. But it is less work to mow constantly for three or four years than to mow them perpetually every second or third year, as this latter process gives them time to recover, and serves to spread the roots and increase their number.

"Once well done is twice done." After mowing, rake clean and burn the bushes, and sow on plaster and rake in hay-seed on the burnt spots; this gives the cattle a chance to browse or feed them off and tread them down. Some say that they cannot be killed by mowing, but such are either mistaken or do not do it faithfully.

Grafton, April, 1858. T. LEONARD.

For the New England Farmer.

CROPS AND STOCK IN MASSACHUSETTS.

In your April number you noticed my address delivered at Fitchburg, before the Worcester North Society, last fall, and made a quotation in relation to the depreciation of grain and the reduction of stock in Massachusetts, and ask, "Can it be so? We wish Mr. T. would show us how the fact is obtained."

I would refer you to the Massachusetts Agricultural Transactions and Returns, by Secretary AMASA WALKER, for 1851, page 440, from a resolve of the Board of Agriculture, founded upon a report of the Valuation Committee to the Legislature in 1851, and the report of that Committee, which may be found at the Library at the State House.

You will also find it in Secretary FLINT'S report for 1854, page 480, it being an extract from the most excellent address of Hon. INCREASE SUMNER, before the Berkshire Agricultural Society. I supposed it had been generally known and proclaimed by the agricultural journals in Massachusetts, as a fact so important to the agricultural interest of Massachusetts should be sounded in thundering tones in every newspaper within our borders, that there may be a waking up to her greatest interest.

That there should be an increase of 40,000 acres of tillage land since 1840, and still a depreciation of grain crops of 600,000 bushels, and also an increase of pasture lands to the amount of 100,000 acres, and a reduction of 160,000 sheep and 17,000 swine, and a very little augmentation in neat cattle, are facts that the citizens of our State are not prepared to believe, without proof the most reliable,—yet it is too true for the credit of our ancient and far-famed Commonwealth.

At the meeting of delegates from the agricultural societies throughout the State, in Convention at Boston, March 20th, 1851, for the promotion of agriculture and agricultural science, the Hon. MARSHALL P. WILDER, from the Norfolk Society, who has ever been the great champion of agricultural and horticultural science, and who has spent great energy of mind and much money for their promotion, was chosen President of the Convention. On taking the chair, he set forth the waning condition of the agriculturist, as a whole, in the Commonwealth, and brought up these very facts with great fidelity, urging upon the Convention the importance of their consideration. Since the formation of the State Board of Agriculture, the great aim in their deliberation and action has been to wake up the drowsy energies of the farmer to the fact of the depreciating crop-producing value of their farms under the old system of culture. The reports that have been issued under the patronage of the Board by their talented Secretary, are among the most valuable documents that have been placed before the American farmer.

JUSTUS TOWER.

Lanesborough, April 16, 1858.

LIVE BRACES FOR FRUIT TREES.—Every fruit culturist knows that crotched trees are frequently split apart and nearly ruined when loaded with fruit. I have found by experience that this can easily be prevented by putting in a live brace or stay when the tree is young, to fasten the two prongs or stems of the tree together. It is done in the following manner: Take a small branch of one of the main stems, growing between the two, and cut off the top end slanting, similar to a scion prepared for lap grafting; then make an incision on the opposite stem with a sharp-pointed knife or small chisel; then insert the top end of said branch, and tie it down firmly with a woolen string; then cover the wound with grafting wax, and the work is completed; remembering to cut the string as soon as the brace has grown fast, to prevent it from girdling the tree. This is the best operation for crotched trees that I have ever seen tried.—*Elihu Cross.*

The Shakers at Niskayuna have practised a system of connecting the branches of fruit trees, something like that described above, for years, and we should be greatly obliged if some one of them would furnish us with a description of their process, with the benefits derived from it.—*Country Gentleman.*

FOOD OF THE ROBIN.

At the January meeting of the Massachusetts Horticultural Society, an interesting discussion took place upon the habits and food of the robin, (*Turdus migratorius,*) and more especially the useful or injurious relation which this bird bears to horticulture. The law prohibiting the destruction of the robin was severely commented upon by many fruit growers, who were disposed to consider the bird as a perfect nuisance to the horticulturist. The other side of the question also found able advocates, till finally, after a long discussion, the result was the appointment of a committee with full powers to investigate the matter thoroughly during every season of the year 1858, to ascertain the habits of the bird as fully as possible; to find out the nature of its food during each month, by examination of the crops of specimens killed at all seasons and on different hours of the same day; and to report from time to time at regular meetings of the society. In accordance with the duty imposed on them, the Committee have made their report for the months of January, February and March, and as the question respecting the utility of the bird has been long mooted and is of general interest, we copy the substance of it. It was drawn up by J. W. P. Jenks, Esq., of Middleboro', and, it will be observed, is decidedly favorable to the robin, though it is possible that the report of the next three months will turn the scales the other way:

"*First.* No robins were seen in this region, not even in our extensive cedar swamps, during the months of January and February, they being thoroughly explored by my direction every few days. Early in March, however, numbers made their appearance, but until the second week in April only the *male* birds.

"*Second.* I found the crops of those killed in the morning either entirely empty or but partially distended with food *well macerated*, while those killed in the latter part of the day were as uniformly well filled with food freshly taken.

"*Third.* From the almost daily examination of their crops, from the early part of March to the present date, I have obtained and preserved in alcohol, *ten* varieties of food, consisting of larvæ, coleopterous insects (beetles,) orthopterous, (grasshoppers,) and araneidaus (spiders). But nine-tenths of the aggregate mass of food thus collected, consist of *one* kind of larvæ, which belongs to the curculio family; but, as yet, I am unable to determine the species. I have frequently taken a hundred from a single crop, and, in one instance, I found one hundred and sixty-two all in a fresh, unmacerated condition. Usually, when this larvæ is found, it is the only food in the crop.

"*Fourth.* To the present date, I have not discovered the first particle of vegetable matter in the crop of a single bird."

For the New England Farmer.

FROM THE SANDWICH ISLANDS.

Makawao, Maui, Dec. 21, 1857.

GENTLEMEN:—Allow me to give you some account of our farming operations at Makawao and vicinity during the year now drawing to a close. I find that I wrote you in February, soon after our farmers had finished, as they supposed, sowing their wheat. Some two thousand acres were sown, came up well, and we were cheered with the prospect of securing a fair crop. Some of the wheat was up to the knees, and all looked exceedingly well, when our fields were attacked with such a host of caterpillars as we had never seen. Heretofore we have not much feared this insect. We have always had them more or less, but they have left us after a few days, and given place to our old enemy, the cut-worm. Not so this year. They approached us on the side next the sea, and swept all before them. More than half of the wheat sown was swept as clean as it could have been done with a sickle, and in a few days the fields had the appearance of stubble fields. Nothing dismayed, the farmers plowed and re-sowed their fields, and some of them lost the second sowing and thrust in the third. Those of us who are farthest from the sea suffered much less from this insect. Our wheat grew rapidly, but in May, when too late to re-sow, we found that our fields were destroyed or greatly injured by the rust. Some hundred acres were thus lost or nearly lost. I had scarcely my seed. I. J. Gower, Esq., my neighbor, tells me that he had not a bushel of good wheat. Kekaha, the most prosperous Hawaiian wheat-grower I have, lost fifty acres from this cause. In Makawao proper, we had so much rain during harvest time that a portion of our crop was injured, and just as we began to cut the grain, nearly every man, woman and child in the place was attacked with the influenza, so that nothing could be done, though the weather was fine. This visitation occasioned another loss, some of the grain spoiling ere it could be stacked. For a while the prospect of a wheat crop was very much darkened. I feared at one time that there would not be enough raised for seed for the coming year, and such was the impression among us generally.

Now the grain is cut, threshed, sold and most of it manufactured into flour, and much to my surprise and gratification, I am able to report that there have been sold to the Hawaiian Flour Company some 15,040 bushels of wheat, by the farmers of Makawao and vicinity, and there are some hundreds of bushels reserved for seed for next year. And most of this wheat is of an excellent quality. For some of it the agent of the Company paid $1,20; so down to $1,10, $1,00, and a small quantity ninety cents and seventy-five cents. God has been better to us than our fears; and we have occasion to bless His holy name.

Of other crops there has been an increase, so far as attention has been turned to them. Very little corn has been raised by our farmers at Makawao, as there is but little demand for it, and no grain is so soon destroyed by the weevil. But the crop of oats has never been so large as this year. They are easily raised and easily kept. The only difficulty we find is the smallness of the market. Beans also have been raised in large quantities, and they might be greatly increased, but for the smallness of our market. The mill company have not sold as much of their flour as they expected, though of an excellent quality, because a good deal of foreign flour from the United States and California has been imported. This has all along been our trouble in respect to our crops, the uncertainty and fluctuation of our markets; and it is very difficult to regulate such matters. I don't know, however, that our troubles are any greater than yours in this respect. The thing which we most need in this selfish world, is competition. This would benefit all classes. At present the mill company, composed of as good men as we have at the islands, and as good men as you have in the United States or England, have not that motive to be economical in manufacturing their flour and in selling it that they would have were there another mill. In my opinion, flour could be manufactured at Honolulu at much cheaper rate than it is now done—at nearly half the expense. I hear, too, that the company refuse this year to allow some mercantile houses to sell their flour, as they did last year, appointing one of their own number to sell all. This has proved a great injury to themselves and to wheat-growers. Some 1350 barrels they have now on hand, besides a good deal of wheat. Much of this flour might have been sold, but for the neglect or refusal to secure merchants as agents. The consequence has been the sending to San Francisco for flour while Hawaiian remains on hand. And if this shall become a drug, the company will gravely inform our wheat-growers in 1858 that the price of wheat must come down. Would men act on the principle laid down by the Saviour, in the golden rule, there would be no necessity of competition, but as things now are, we greatly need it, and shall ere long seek for something of the sort. It is needed not only in reference to wheat-growing and manufacturing, but in reference to other things. Just now, it costs more to go down to Honolulu, some seventy miles, a single night only being needed, than it costs to go from Boston to Buffalo, not

to say to St. Louis. So of freight; we sometimes pay more from Honolulu to Makawao, than from Boston to Honolulu, via Cape Horn. All in good time this evil will be remedied, if things shall continue prosperous.

December 22nd, 1857.

Let me add a few items of intelligence from the islands, and forward my communication. I have more to say on the subject of farming, its great importance here, and every where; but I may not take hold of that subject, particularly in its bearing on whalers, in this communication. I may make it a topic for *winter*, if spared. In the meantime, I hope you will present every motive in your power to induce all of our people, and particularly the young men of our country, to remain at *home*, and engage in plowing the fields, rather than tempt the dangers of the deep, and plow the ocean; or try their fortune in the mines of California. Early in the year, two young men, sons of missionaries at the islands, obtained a reluctant leave of their parents, and going to California, tried their hand at mining. One of them gave out after a few weeks, and sought his island home. The other held on awhile longer, suffered a good deal of hardship, and some sickness, made nothing, and finally left, fully satisfied with his experience in the gold-digging line. Good will result from the experience of these boys, good to themselves and good to other boys of the mission. The state of things at the mines is truly deplorable. No Sabbath—no God—no hope—is true of a vast majority of the wretched men who congregate in that wretched land. How infatuated are the men and youth who leave a New England home for the country of gold, thus putting in jeopardy their every interest, and hazarding their undying souls. The Lord save our countrymen from this egregious folly.

Yours truly, J. S. GREEN.

P. S. Not long since the Royal Hawaiian Agricultural Society had a meeting which the newspapers called the *annual meeting*, though a year and a half had passed since the last meeting and fair, with the annual address. Judging from appearances, I think it may be safely concluded that the society, as an agricultural society, is defunct.—True it lives nominally, and officers were chosen for the next year, but I see no list of committees, nor subjects for discussion for another annual meeting, nor do I see that the society adjourned either *sine die* or otherwise. James F. B. Marshall, Esq., the retiring President, delivered an address, not particularly interesting, I judge from reading it, but as able perhaps as could have been expected from one who perhaps thought himself pronouncing a funeral oration over the remains of the society. I could give some half a dozen causes for the decease of the society, or for its change to a kind of seed, fruit and plant society. One cause may be seen in the material of which the society was composed. Mr. Marshall tells the story in a few words. On examination, he found it thus on a list of members: Of the whole number 216: of these were 55 merchants and traders; 44 government officers, 24 clerks, 20 missionaries and clergymen; 16 mechanics; 7 officers of foreign governments; 6 hotel keepers; 6 physicians; 5 sea-captains; 5 lawyers; 2 school-masters; 4 editors; 1 traveller—195 non-agriculturists, and 10 grazers and 11 planters and farmers—but 21 practical agriculturists in all. Who can wonder that a society composed of such materials should cease to feel an interest in the professed object of such a society? Had the 216 men who were members of the society been agriculturists, or a majority of them, the results of their labors and deliberations since 1850 would have been very different, I judge. Another cause I find in the want of variety in subjects selected and given out to committees at one meeting, to be written upon and read at the next meeting. Nearly the same subjects were committed to committees each year of the society's existence. No variety, no advance; so that reports became stale. The *fair* had considerable interest for two or three years, and some degree of interest while they continued. So also the annual addresses, which were not commonly given to working-men who took a lively interest in the society, but more frequently to foreign officials who knew little of agriculture, and less of the islands—these called out an audience; but the dissertations however important or interesting they might have been, were commonly read to nearly empty seats. Some few even at Honolulu took an interest in the society. The late Judge Lee seemed to have his heart much set upon the success of the experiment which was being made in agriculture among us. Had this excellent man enjoyed health, I doubt not he would have held on to the society, and done still more than he did, for its prosperity. But he could not sustain it alone. I hope it has done good. Some six or eight numbers of the Annual Transactions of the society were printed and distributed among the members of the society, and perhaps sent abroad. In good time, another society, or other societies may spring up from the ruins of the old one, composed of more practical men—materials, if not better, certainly of more homogeneous character. We shall see in good time.

Things with us much as usual. Some commercial embarrassment, but nothing very serious at present.

Your fellow-laborer in the cause of agriculture.

J. S. GREEN.

For the New England Farmer.

MANURES FOR INDIAN CORN.

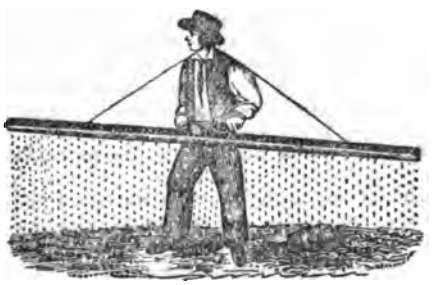
The paper on this subject, lately given to the public in the *Country Gentleman*, by Mr. Harris, of Rochester, N. Y., is truly instructive. He states things just as they come to his observation, without regard to preconceived theories. This is the only just way of acquiring or communicating knowledge.

I am truly surprised at the little benefit derived from the use of ashes of wood. There is no fertilizer sought with more avidity, or used with more success in this vicinity. Ashes have been found valuable for corn, and also for root crops generally, to which they have been applied. So great has been the success in the use of ashes, that no one despaired of a good crop, when they could command a full supply. Of the comparative value of ashes, leached or unleached, I have heard various opinions. They are used in greater quantities, on our lands, after they have been

leached—under the apprehension that they are equally valuable for growing crops. It is very clear, from Mr. H.'s experiments, that no reliable conclusions can be deduced from theory alone. The same gentleman, if I do not mistake, has recently expressed a like opinion as to analyses of soils. So fast are the improvements of the present day, that it takes as much care to unlearn what is erroneously stated, as to find out, by actual trial, what is correct. ESSEX.

April, 1858.

WELLS' GRASS SEED SOWER.



Some three or four weeks since we spoke of this Seed Sower in general terms, not then having had an experimental knowledge of its ability to sow grass seed quickly and well. Since then we have used it to stock several acres with grass seeds of various kinds, and found it to answer the purpose admirably for which it is designed. It is always difficult to sow grass seed evenly, under favorable circumstances, but when it is windy, or it is to be done by inexperienced or unskilful hands, not only a loss is incurred by a waste of seed, but by having some portions of the field overstocked while others are left bare, thus rendering both unproductive. A money loss is felt, and a loss of that just and proper culture in which any good farmer feels a proper and honest pride.

The use of *Wells' Seed Sower* will prevent these occurrences; it scatters the seeds evenly and with rapidity, so that an acre may be well sowed as fast as a man can comfortably walk over it at distances about *nine* feet apart. In order that the whole ground shall be covered, it is well to let the sower lap a little at each succeeding breadth.

A single sower will answer for a neighborhood of a dozen persons, and it is so light that a child can carry it from place to place. For sale by Nourse, Mason & Co., Quincy Hall. Price $4.

THE GAPES IN CHICKENS.—A correspondent says: Tell those of your readers who are interested in raising chickens, that a small pinch of gunpowder, given to a chicken with the gapes, will effect a sure and complete cure in from one to three hours' time, and leave the chicken healthy and hearty.—*Cal. Farmer.*

For the New England Farmer.

REVIEW OF THE FALL AND WINTER.

MR. EDITOR:—After the rigors of winter have passed, and the time of singing of birds has arrived, and nature wears a more congenial aspect, it may be well to recount those meteorological conditions which have been the main features and governing principles of the past winter. A winter not of extreme heat nor of extreme cold, but a winter whose changes of temperature have been congenial, for the climate of the green hills of Vermont. Although its heat and its cold have not been excessive, yet the quantity of snow has been extremely small, and so has the quantity of rain during the winter months.

In this review of the winter I will include the autumnal months to *October*, to the time when I closed the review of the summer of 1857. The rains continued through October, and two inches of snow fell on the 20th. The whole amount of rain and melted snow was 5.60 inches, and the temperature was 44.95 degrees, it being colder than the four preceding years by 2.39 degrees, and is the coldest October since 1853. Its extreme daily mean temperature was 58.66 and 30.66.

November was a mild month. Its mean temperature was 36.85 degrees, which is 2.58 above the mean. The storms were frequent and light. There was 2.14 inches of rain and one inch of snow.

December was unusually mild. Its temperature was 27.70, and was 4.64 above the mean. There was 2.52 inches of rain and 7.50 of snow. Storms were frequent and light, and winter began so gradually that the time of its commencement cannot be correctly stated, as we had little or no winter weather through the month.

January, 1858. This has been the mildest January for many years. Its temperature was 24.30, being 6.82 degrees above the mean of the five preceding years, and 15.61 deg. warmer than last year, which was the coldest of the last six years. The amount of precipitation was 1.83 inches of rain and melted snow, and 7.25 of snow. The highest daily mean was 43.66 deg., and the lowest, zero. The mercury stood below zero only a part of one day during the month.

February was rather a cold month. Its temperature was 15.51 deg., being 4.20 below the mean, and 11.55 colder than February last year, which was the warmest of the six. The whole amount of water which fell during the month was .61 of an inch, which was produced by 5.50 inches of snow, but no rain. The thermometer stood at or below zero eleven mornings and four evenings, but did not sink to zero at 2 P. M. during the month. The mean was below zero five days, and the greatest extreme was 13 deg. below zero, on the morning of the 16th.

Although *March* has been a mild month, yet it has been about one degree colder than the mean; and the coldest of the past six years, with the exception of 1856, which was about four degrees colder than the present. We had 1.18 inches of rain and five inches of snow during the month, while last year we had 2.29 of water and 10.75 of snow; thus showing that our storms have been far less this year, which gives the month a more pleasant appearance.

We have had 27 inches of snow and 14.18

inches of rain during the last six months, which is about half the quantity of snow that fell during the corresponding months of 1856-7, and nearly an equal quantity of rain. There has been little or no good sleighing, although the ground has been partially covered with snow the greater part of the time. The amount of snow at any time would not exceed five or six inches, while its average depth was less than two inches; consequently the ground has been frozen to a great depth. The earth is extremely dry, owing to the small quantity of rain which has fallen during the past two months.

The birds have made their appearance in the following order: Blue-bird arrived March 17; robin, 19; black-bird, 27; Phœbe and meadow-lark, April 1. Vegetation has not made any progress, and the fields look barren and desolate. There was a thunder-storm last night, which passed to the north, at about 6 P. M. Another came over this place at a little before seven, with heavy, rolling thunder and vivid flashes of white lightning. The color of the lightning denotes a low cloud, which appeared to cover only a limited space. Our first thunder-storm last year was on the evening of the 28th of May, nearly two months later than the present. To-day the Green Mountains are clad in their robes of white, wearing the aspect of winter—a natural consequence of an electrical disturbance, which passes away as the equilibrium is restored.

D. BUCKLAND.

Brandon, Vt., April 6, 1858.

SHALL WE EAT PORK?

MESSRS. EDITORS:—We shall, of course.—The question is altogether superfluous. Nine-tenths of us have from one to a dozen porkers, within a stone's throw of our dwellings, (the other tenth wish they had,) and what shall we do with them? Your correspondent might as well inquire, "when we are hungry, shall we eat or starve?" No one feels that the old Levitical laws are binding on us of this generation; they are the fossil remains of the buried and almost forgotten past, and are not to be classed with the commands of the Decalogue, which are founded, as I believe, upon eternal principles of right. Commentators teach, and our reason accepts the teaching, that the law concerning swine's flesh was enacted from causes local and peculiar to that climate and people. The anti-swiners will admit that what is very proper food in one climate, may be improper in another; and a slice of raw blubber may be very palatable and stomachic in latitude eighty, with the mercury at forty below zero, while at the equator the same article would be disgusting. I have seen many men who professed the same belief as your correspondent; but they will all confess themselves in the daily use of that which their reason and conscience so strongly condemn. The fact is, gentlemen, your scruples are not skin deep, nor need they be. The vision of the Apostle ought to teach us, as it did him, that what God has cleansed, we should not call unclean. That there is a large class of diseases brought on by the use of pork, "I deny, and call for proof." What if I assume that it is the use of beef that brings on the diseases to which you refer; is not my position as tenable as yours? But "every creature of God is good, and nothing to be refused," but they should be used with moderation as well as received with thanksgiving. The human economy requires a certain amount of carbon to keep up its fires and lubricate its bearings, and we find the article in a highly concentrated and convenient form on the back of a well fatted porker. What a cunning elaborator of essential oils the comfortable rascal is! He is a true gentleman of science, and in his little laboratory, he performs feats of analysis unapproachable by a Johnson. He will filter the slops of the kitchen, resolve into their constituent elements the refuse of the garden, "from seeming evil still educing good," and separate and assimilate the surplus of the grain-field, and, interstratified with muscle, will be found a whole "carboniferous system" on his back and sides, as the result. And how the residuum, when applied to the garden, "with transport touches all the springs of vegetable life!"

The fact is, gentlemen hog defamers, you must reform your habits, and tell your ladies to moderate their cuisine. Don't set down and "stuff you full as an egg" of fried sausages, and hot buckwheat cakes, saturated with their fat, and then in a fit of indigestion, mentally send all pigdom down a steep place into the sea. Don't lay your gastronomic sins at the door of the sty, when they should be laid at the door of your face. You would not think of building a rousing anthracite fire in your parlor, with the mercury at ninety, nor should you build one equally fierce in your corporeal kitchen with fat pork, under like thermal conditions. When you can raise 150 lbs. of steam with pine wood, what is the use of rosin? Regulate your fires then according to the season, and let piggy live and enjoy his brief year; and with the pork-barrel well filled with his embalmed remains, you may snap your fingers at the wintry blasts that howl drearily around your dwelling.—*Country Gentleman.*

For the New England Farmer.

INDIAN CORN.

I am happy to learn from "M. A.," in the *Farmer* of this date, that he never reported 145 bushels of corn to the acre. I am glad that such a statement has not the sanction of his authority. I had the impression that he had thus averred—but I may have confounded the remarks of the *Ploughman* on the subject—and not having the papers at hand, to refer to, must leave it, with the reflection that his professional cloth is more likely to be correct than my own, though in matters agricultural, I always endeavor to speak truly, according to my knowledge. I heartily concur in the opinion that there is increasing attention given to the culture of Indian corn, and that it is becoming to be looked upon as one of our most valuable crops. I, this morning, sent a parcel by express, to a distinguished agriculturist, in the Empire State, telling him that the variety had been cultivated on my native hills for *twenty years* or more; that it made good Johnny cakes, and good pork—and these afforded as good living as was enjoyed by our Pilgrim Fathers.

P.

April 17, 1858.

For the New England Farmer.

PEARS ON QUINCE STOCKS.

MR. EDITOR:—As there has been much said about the pear on the orange quince, I will tell you my experience. I pull up the sprouts from the roots of old quince bushes—the best come from the ends of small roots—shape the roots and tops, set them in rows three feet and a half apart, and the sprouts about ten inches apart in the rows, perhaps fourteen inches would be better. When they are well rooted and large enough, bud or graft them as near the ground as possible, so that you can fetch the soil up over the joint. Bud when the stock is half an inch in diameter and graft when it is three-fourths of an inch. I have thought that grafting was the best, but either way will do well.

The kinds that have failed with me are the Bartlett, Golden Beurre, Dix, Russel, Seckel, Glout Morceau, St. Michael, Passe Colmar, Beurre Diel, and some others. The kinds that grow and bear well, are the Louise Bonne de Jersey, English Jargonelle, Napoleon, Duchess de Angouleme and Beurre de Aremberg. The Thorn and Sugar plum will do for stocks when we know the kinds that will unite with them.

I have a very thrifty Glout Morceau on the sugar plum, full of blossom buds now; I grafted a wild pear into the thorn, which grew strong, then budded and grafted into that the Dix, the Seckel and Flemish Beauty, which are growing finely, and the Flemish Beauty is now full of blossom buds.

I had a Passe Colmar on the thorn which grew well for three years, then broke out, but it had rooted above the joint. I removed the thorn root, then set the tree down, and it is doing well now.

I have about sixty apple trees, from one to two inches through; some animal bites them in the spring so as to loosen the bark from the ground up one foot and a half. I lay it to the woodchucks, but my neighbor thinks it the skunk, for he set a trap and caught the skunk and the trees were not bit after that.

I made a wash of one quart soft soap, quarter of a pound of sulpher, a hoe full of green cow manure, and five quarts water, and put it on with a brush or swab; the animal stuck his teeth in a few times, but did not injure them afterwards. Last fall I put the same wash on, to prevent the mice, and I believe not a tree is injured where I put it, while my neighbors complain that theirs are injured by the mice.

OLIVER BUTTERFIELD.

Francestown, N. H., April 13, 1858.

For the New England Farmer.

POUDRETTE.

I have often thought what a pity it was that so valuable a fertilizer as our night soil should be made almost wholly worthless in its manufacture through the cupidity of those engaged in preparing it.

No one will doubt for a moment but what pure night-soil, with only just enough of foreign matter with it to deodorize and make it usable would be one of our most valuable concentrated fertilizers, and as such, no doubt would find ready purchasers—but if we are compelled instead of this to purchase an article, three-fourths or more of which is composed of Jersey sand or muck—why, all is, we shall not probably be caught but once by *that* bait.

Do please, Messrs. Manufacturers, give us a pure article, and I will warrant you not to be obliged to advertise for the address of farmers—or have to make them a present of an almanac in order to obtain their custom. At least, I will promise you *one* purchaser. W. J. P.

Salisbury, Conn., April 22, 1858.

THE PREACHING OF THE TREES.

FROM THE GERMAN OF ORDEN.

At midnight hour, when silence reigns
Through all the woodland spaces,
Begin the bushes and the trees,
To wave and whisper in the breeze,
All talking in their places.

The Rosebud flames with look of joy,
And perfumes breathes in glowing;
"A Rose's life is quickly past!
Then let me, while my time shall last,
Be richly, gaily blowing!"

The Aspen whispers, "Sunken days!
Not me thy glare deceiveth!
Thy sunbeam is a deadly dart,
That quivereth in the Rose's heart—
My shuddering soul it grieveth!"

The slender Poplar speaks, and seems
To stretch her green hands higher;
"Up yonder life's pure river flows,
So sweetly murmurs, brightly glows,
To that I still aspire!"

The Willow looks to earth and speaks:
"My arm to fold thee yearneth,
I let my hair float down to thee;
Entwine the rein thy flowers for me,
As mother her child adorneth!"

And next the wealthy Plum tree sighs;
"Alas! my treasures crush me!
This load with which my shoulders groan
Take off—it is not mine alone:
By robbing you refresh me!"

The Fir tree speaks in cheerful mood:
"A blossom bore I never;
But steadfastness is all my store,
In summer's heat and winter's roar,
I keep my green forever!"

The proud and lofty Oak tree speaks:
"God's thunderbolt confounds me!
And yet no storm can bow me down,
Strength is my stem and strength my crown;
Ye weak ones, gather round me!"

The Ivy vine kept close to him,
Her tendrils round him flinging;
"He who no strength has of his own,
Or loves not well to stand alone,
May to a friend be clinging!"

Much else, now half-forgot, they said:
And still to me came creeping,
Low whispered words, upon the air,
While by the grave alone stood there
The Cypress mutely weeping.

O! might they reach one human heart,
These tender accents creeping!
What wonder if they do not reach!
The trees by starlight only preach,
When we must needs be sleeping.

For the New England Farmer.

HOW TO PREVENT HARD TIMES.

In the year 1832, when the cholera first reached Boston, many were alarmed, and suddenly cried out, as in days of old, "What shall we do to be saved" from the jaws of this monster disease? My reply usually was, "You should have asked this question many years ago." So with regard to the present wide-spread and increasingly alarming pecuniary distress. To those who cry out in the intensest mental agony, "What shall we do?" I usually reply, "You ought to have asked this question, with solicitude, many years ago." Young men, above all others, at their first setting out on the journey of life, should both ask, and find a reply to this question.

It may not be useless to present a list of cases of young men who early pursued an anti-hard-times course, and lived to reap the full benefit of it. Although I suppress their names and place of residence, the reader may be well assured they are *real* cases, and not only *real*, but *living* ones.

S——— D., of N., in Mass., when, at the age of twenty-one, he was fairly released from the paternal farm, hired out to a neighboring farmer two years, at twelve dollars a month and board, of which he saved, besides clothing himself, two hundred dollars. His wages, under a new employer, were now raised to fifteen dollars a month or one hundred and eighty dollars a year, of which he laid up *one hundred and fifty*.

A. G. L., of W., in Conn., after reaching the age of twenty-one, labored a long time for seventy-five dollars a year and his board; of which he laid up fifty. It must, however, be admitted that he had some mending done for him by his friends, gratuitously.

Mr. ——— T., of L., in Mass., after the age of six years, wholly sustained himself by the avails of his own labor, with the exception of twenty dollars. It may also be added that from the age of six to fifteen, he subsisted on brown bread and milk.

W. A. W., of W., in Conn., at the age of twenty-two, had remunerated his parents for all the expense to which, in the progress of his bringing up, both early and late, he had been subjected.

All these individuals are, at present, men of decent property, good standing, and respectable character, and in most respects beyond the reach of *hard times*. Thousands of young men among us may learn a lesson from them and "go and do likewise." It may not, indeed, be necessary or even practicable for young men to clothe themselves for twenty-five or thirty dollars a year; but with their increased wages they may economize in the same proportion. If with one hundred and forty-four dollars a year, Mr. D. could lay up one hundred dollars, he who now receives two hundred and sixteen can lay up one hundred and fifty. And the young man who will do this, will be wise and economical in other matters; and will be duly fortified against hard times. W. A. A.

WILL UNDERDRAINING PAY?—This depends on circumstances. If good naturally underdrained land can be obtained in your neighborhood for from $15 to $20 per acre, it would not pay, in all probability, to expend $30 per acre in underdraining low, wet or springy land; but in all districts where land is worth $50 per acre, nothing can pay better than to expend from $20 to $30 per acre in judicious underdraining. The labor of cultivation is much reduced, while the produce is generally increased one-half, and is not unfrequently doubled; *and it must be remembered that the increase is net profit.* If we get $15 worth of wheat from one acre and $20 worth from the other, and the expense of cultivation is $10 in both cases, the *profit* from the one is twice as much as from the other. That judicious underdraining will increase the crops one-third cannot be doubted by any one who has witnessed its effects. If it should double the crops, as it often does, the *profit* would be four-fold.—*Genesee Farmer.*

EXTRACTS AND REPLIES.

A BUTTER COW—100 POUNDS PER MONTH!

A reliable gentleman, residing in Dedham, Mass, informs me that he is owner of an imported Alderney cow, from which he can make one hundred pounds of butter per month, for three months—May, June and July. Is it possible?—and what is the fair product of what is styled a *good* cow?

The above cow cost $400. G. M. L.

Boston, April, 1858.

REMARKS. — About *twenty-one* pounds per week! Yes, it is possible, but without ocular demonstration, the statement would be hard to believe. A cow that will yield *ten* pounds of butter a week is a "good cow;" one that yields *fifteen* pounds a week is an *extraordinary* cow,—and one that yields *twenty-one* pounds per week, for thirteen weeks in succession, is such a cow as few people have yet seen.

DORKING EGGS.

Will you inform me where I can obtain the eggs of the pure White Dorking fowl? and also if the latter will *mix* if allowed to run with hens, (hens only) of another breed? G.

Auburn, N. H., April 14.

REMARKS.—The eggs may be procured at Mann's, Court Square, Boston, at 50 cts. per dozen. There can be no mixture under the circumstances you describe.

THE QUICKEST TIME SHOEING HORSES EVER KNOWN.

Mr. H. J. BATCHELDER, of this town, set two shoes, after the feet were fitted, drove eight nails in each shoe, and finished them up in two minutes, fifty-five seconds! Also, he took off two shoes and pared the foot, set on the shoes and finished them up in a workmanlike manner, in six minutes!

Mr. Bachelder served his apprenticeship in this State and Massachusetts, spent the last two years in West Fairlee, Vt., and is now employed by Amos Morrill, of this town, where any person who will favor him with a call can get as good shoeing done as can be found in the world.

Strafford, Vt., 1858. SOUND FOOT.

TO PREVENT CROWS, BLACKBIRDS AND CUTWORMS FROM DESTROYING CORN.

Stir in warm tar with the corn, then mix with plaster before planting.

Plant no pumpkins except in the outer rows, and give the plant a direction outward.

Will tar applied to young apple trees late in the fall, prevent mice from gnawing them?

Mt. Holly, Vt. J. P.

REMARKS.—Tar might prevent the gnawing by mice wherever it is applied, but would it not be dangerous to a young tree to cover so much of its stem as would be necessary to keep it from mice? Snows drift about young trees, and we have seen them completely stript of their bark three or four feet from the ground.

WHITE STRAWBERRIES.

I have on hand a small lot of white strawberry plants, which I wish to introduce into the market. They bore abundantly last season, were ripe as early as any which I had, and held out the longest.

I would be much obliged if you would give me a little information in regard to grafting an orange tree; I have one very thrifty, about two years old, which has never blossomed.

AUSTIN C. PACKARD.

North Bridgewater, April, 1858.

REMARKS.—This publication will introduce the "White Strawberry," and perhaps induce some one who knows to tell you about grafting the orange tree.

CRANBERRY PLANTS.

Can you inform me where I can obtain the best kind of cranberry roots sufficient for setting three or four acres? A SUBSCRIBER.

Winchendon, Mass., 1858.

REMARKS.—Select the plants bearing the finest-looking berries you can find in the neighborhood of the land you intend to plant. This is the course we should take.

RELATIVE VALUE OF ARTICHOKES.

Will some one inform me of the relative value of artichokes compared with potatoes, or other roots, as feed for swine or cattle. They can be made to yield four hundred bushels to an acre, and be dug in the spring, at a time when there is a scarcity of other vegetables. A FARMER.

Windsor, Vt., 1858.

COVERING MANURE.

* * * I am confident from forty years' experience, that it will not do to bury manure very deep in the cold region of Vermont.

Waitsfield, Vt., 1858. ERASTUS PARKER.

TO STOP THE NOSE-BLEED.

Firmly press the thumb and finger on opposite sides of the nose, immediately below the bone, from three to ten minutes, according to the rapidity of bleeding. If the bleeding be in the extreme point, then compress that part in a similar manner. L.

ARTIFICIAL WHALEBONE.

It would almost seem that science, in its rapid march, would finally procure for the great whales of the deep a respite from the tormenting and deadly assaults of the harpoon. Artificially made oils and fluids are steadily displacing animal products for purposes of illuminations, and now by a somewhat recent discovery the bone of the whale is no longer needed to supply our umbrella and skirt-makers with skeleton frames. In 1855, Joseph Kleemann of Meissen, Germany, obtained a patent for a mode of preparing a substitute for whalebone. The process has been put into practice in this city by Vellman, Solomon & Co., who are turning out about twenty thousand umbrella frames every week! It consists in taking sticks of the common ratan and soaking them in a liquid extract for about four days, after which they are immersed in a solution of any of the iron salts, which gives the ratan a a deep black dye. Subsequently the sticks are exposed in a close vessel, for the space of about one hour, to the action of steam of about three or four atmospheres' pressure, and then thoroughly dried in a furnace or drying room at a temperature of about 180° Fah., when they become ready for the impregnating process.

The sticks are then placed into an iron cylinder (capable of standing the pressure of at least ten atmospheres,) connected by a pipe with an open vessel, containing a varnish made by dissolving 120 parts of shellac and 100 parts of burgundy pitch in 90 parts of absolute alcohol. The air having been exhausted from the cylinder, the cock connecting it with the vessel containing the varnish is opened, when the atmospheric pressure will force the varnish into the cylinder and into the pores of the ratan.

The impregnation of the ratan is rendered more perfect by the use of a pump for forcing the solution into the cylinder. The ratan has now changed its character and become hardly distinguishable from the best quality of whalebone, except that it is somewhat more elastic and less liable to splinter and break. It has gained one hundred per cent. in weight by impregnation. After being removed from the cylinders, or impregnators, but little remains to be done in the way of drying, polishing, fitting the ends, &c., to prepare it for use for umbrellas, parasols, canes, &c., and various other purposes.—*Scientific American.*

REMEDY FOR LEAKS.—A correspondent of the *Lynn News* says:

Some years ago I had a leaking "L." Every northeast storm drove its waters in. I made a composition of four pounds of rosin, one pint linseed oil, and one ounce red lead, applied it hot with a brush to the part where the "L" joined the main house. It has never leaked since. I then recommended the composition to my neighbor, who had a lutheran window which leaked badly. He applied it, and the leak stopped. I made my water cask tight by this composition, and have recommended it for chimneys, windows, &c., and it has always proved a cure for a leak.

For the New England Farmer.

HORSE TAMING.

MR. EDITOR:—The art of subduing horses of vicious and ungovernable dispositions, has assumed an importance only commensurate to its great utility. The wonderful success of our countryman, Mr. Rarey, in England and France, has created a great excitement, and a consequent desire to be informed of the method by which these astonishing results are achieved. I am more particularly induced to revert to this subject, from the fact that numerous recipes have been published in New England papers, professing to be the method by which Mr. Rarey subjugates and has acquired so much control over the horse. One of the recipes is as follows: "Take the grated horse-castor or wart, which grows on the inside of the horse's legs, put it on an apple or other enticing substance, and let him eat it; then rub a few drops of the oils *Cumin* and *Rhodium* upon his nose."

It is stated that these drugs possess some potent charm by which the animal is rendered obnoxious to his vicious propensities, and his disposition radically changed to that of subservience, docility and implicit obedience to the mandates of his conqueror. In response to which I unreservedly assert that no such result is produced. The horse castor exhales an extremely pungent ammoniacal effluvium. The oil of Cumin is manufactured from the seed of the same name, and in smell somewhat resembles turpentine; it is very persistent, and will volatilize its strong odor without any perceptible diminution for several days. The oil of Rhodium takes its name from the island of Rhodes, or roses. It is procured by maceration from rose-leaves, and has a very agreeable and powerful aroma. The use of the drugs in subduing an ungovernable animal is quite limited. Their powerful smells serve to attract his attention for a few moments, and in this manner, may possibly prove auxiliary to subsequent operations in ameliorating his incorrigible temper.

It is a fact, authentic beyond all cavilling, that horses imbued with the most intelligence and qualities of endurance, are generally the most stubborn and implacable; hence, the inestimable value of some process by which they may be reduced to domestication and consequent utility. The plan pursued by Mr. Rarey and myself produces this result, and therefore its importance. No horse will submit to man unless convinced of his superiority. To obtain this supremacy in ordinary cases require no skill, but where the animal is headstrong and obstinate the matter assumes a more formidable aspect, and defies the orthodox means by which success has been realized.

The obdurate horse, then, must be vanquished in a trial of strength, he must be placed in such a position that all his efforts and struggles at resistance shall be skilfully encountered, and rendered futile. This accomplished, the horse becomes a slave, and only as such, is he useful. In this lies the whole secret of horse taming. It requires nothing but confidence, fearlessness, and patience and perseverance in the operator to perform what appears to be almost miraculous. The time required to conquer the horse varies with the animal's disposition, from fifteen minutes to three hours, and in a few isolated cases, it is necessary to repeat the operation. In general it is quickly and noiselessly accomplished, but at times the struggle is severe and protracted, but success invariably eventuates; during the period I have imparted instructions in horse training I have had several very vicious animals subjected to my treatment, which I have in no instance failed to conquer.

I am not at liberty to give the details of my practice, as it would interfere with my pecuniary interests. The secret has been known to a few horse-trainers in this country for many years. And in the elementary operation pursued in gentling the horse for the uses of the amphitheatre and hippo-dramatic performances, it has always been regarded as a great secret, and only imparted by professional horsemen under the seal of secrecy, and for a large remuneration. Mr. Rarey is not the originator, but his familiarity with the horse has developed in him a superiority and skill, which the amateur cannot realize. In conclusion, I would remark that any man that can handle a horse, can effectually operate my method of subduing him. Yours respectfully,

New York, 1858. CALEB H. RANY.

For the New England Farmer.

BARNS, AND BARN ROOM.

MR. EDITOR:—Your correspondent, "Pine Hill," in the *Farmer* of Jan. 30th, gives a description or plan of a barn, in reply to the inquiries of a "Subscriber," which I think will not meet the approbation of farmers generally.—Twenty feet posts is decidedly an inconvenience, for it is imposing upon the pitcher of hay, a task that is extremely irksome, in the hottest season of the year. Sixteen or eighteen feet posts, to the extent, is as high as a person of ordinary muscles and strength would wish to pitch, while heated with a hot July's sun.

Your correspondent recommends a "brick underpinning two feet high, containing, at suitable distances, small doors eighteen by sixteen inches, for the purpose of light and ventilation. The cellar should be at least eight feet deep, with two rows of brick piers eight feet apart—the whole length of the barn. The entrance to the cellar for teams should be at one end, secured by a tight door." It is obvious that a barn should be built in the most thorough and substantial manner, therefore underpinning should be dispensed with, especially, a brick one. A well constructed wall three feet in thickness laid in mortar and cement, makes a substantial foundation for the barn to rest upon, which joiners readily admit is preferable to underpinning. Instead of the small doors for light and ventilation, windows on hinges are decidedly preferable, as they will afford these at will; this obviates the necessity in extremely cold weather of keeping a door open for the sole purpose of affording light.

The space for windows can be reserved while completing the wall, in less time and with less trouble and expense than could be done in procuring and setting underpinning. I presume "Pine Hill" would have the two rows of piers stand directly under the posts in the body of the

barn; such being the case, the drive-way would be only eight feet in width, which would be too narrow for either barn or cellar. The drive-way in the cellar being under the drive-way in the barn, its entrance must, of necessity, preclude the privilege of driving through the barn, which is not good policy. The trap-door in the floor-way should be dispensed with, and the cellar should be of such depth as to admit of tipping a cart. The "Model Barn" in the *N. E. Farmer*, p. 272, vol. 4, embraces much that is economical and convenient. MIDDLESEX.

Feb. 26, 1858.

MASSACHUSETTS AGRICULTURE.

We have before us the fifth annual report of the Secretary of the *Massachusetts State Board of Agriculture*, together with the reports of committees appointed to visit the autumnal exhibitions of the several county societies last fall. The volume is a handsome octavo of 371 pages, on fine, white paper, is illustrated with excellent engravings of horses, cattle, sheep, swine and agricultural implements,—it is printed well, edited with ability, by Mr. Secretary FLINT, and is a credit to the Board of Agriculture and to the State under whose auspices it has originated.

The volume opens with an account of the recent operations of the Board of Agriculture and of the State Exhibition last autumn, and its results, and incidentally giving an account of an effort to organize a new Massachusetts Agricultural Society. The Secretary then proceeds to give a detailed account of the State Fair held in Boston, last October, into which he has introduced beautiful portraits of some of the stock exhibited, among which are a Short Horn bull, an Ayrshire bull, five portraits of horses, two groups of Cotswold sheep and a Hereford bull and heifer, owned by the State, and kept at the State Farm, at Westboro'. The volume is also interspersed with numerous engravings of agricultural implements, articles used for dairy purposes, &c.

In arranging the statements of the competitors for premiums and the reports of the judges, the Secretary has not contented himself with presenting us a dull detail, merely, of these matters, but has enlivened them with a short, clear and comprehensive account of the origin of the animal under consideration, together with a brief description of its characteristic points. These terse essays, wrought in, as they are, among the dry mass of heavy statements of fact, are like gushing springs or green oases, in hot sands, kindling and enlivening the whole work, and giving it an attraction which it must have failed to possess without them. They are drawn with fidelity, indicate considerable research and industry on the part of the Secretary, and we think may generally be relied upon as correct; while the engravings of which we have spoken, are introduced among the descriptions, so that each may give force to the other. Some of the subjects considered are as follows: viz:—

Improved Short Horns; North Devons; Ayrshires; Herefords; Alderney or Jersey Cattle; Grade or Native Stock; Milch Cows; Working Oxen and Fat Cattle.

Then comes the subject of *horses*, and the first introduced is the Thorough Bred; then Roadsters and Horses for General Utility. The same plan is pursued with regard to Sheep, Swine and Poultry. Agricultural Products, including the Dairy, are also considered. The subjects of Agricultural Implements, of Wine, of Entomology, each receives a liberal share of attention. A somewhat detailed account of the doings of the Board of Agriculture on the State Farm for the last year, closes the report of the Secretary.

Some forty or fifty pages of this report are occupied in a mere detail of entries by the competitors, and are then reported back again in a different form by the judges. This is all proper in this volume, but to repeat it in less than ten years, would be a waste of space and energy. Once, at the expiration of ten years, these details will be valuable to afford a contrast and show whether we are advancing or receding. As a whole, the Report is one of much value, while there is little, very little, to which reasonable objections may be urged.

The second portion of the volume is made up of *abstracts of returns from the county agricultural societies of the State*, and first, of extracts from addresses delivered before them. These extracts are of no ordinary character; they indicate a wide range of inquiry and learning in their authors, and, as literary productions, will compare favorably with the literary labor of the best reviews of the country. They are also remarkable for their pure tone of morals, for the just and attractive views of rural life which they present, and for their earnest faith in the progress of agricultural art and its remunerative results. It affords us sincere pleasure to bring together upon this page the names of those persons who left the feverish pursuits of commerce, physic, law or other occupation, last autumn, to commune awhile with Nature in her fresh and glowing walks, and to instil into others the wholesome and charming sentiments of which they are themselves the happy recipients. We wish we could send to every farmer's fireside in the Commonwealth, some one of these Addresses, so full of well-tempered zeal, so rich in encouragement, and so abounding in common sense and high-toned morality, and firm faith in Him who has promised us perpetual seed-time and harvest. We now subjoin the names of such persons as the Secretary has reported, who have done themselves an honor, and their

State a distinguished service by giving a portion of their time and talents to the important cause of agriculture. We take them in the order in which they stand in the volume, and the first is that of Dr. E. G. KELLEY, before the Essex Society, at Newburyport. Subject—"*The Farmer's Home and its Embellishments.*"

Rev. CHARLES BABBIDGE, before the Middlesex Society, at Concord. Subject—"*Agricultural Heart-Work.*"

E. F. SHERMAN, before the Middlesex North, at Lowell. Subject—"*Articles of Food.*"

GEORGE M. PRESTON, before the Worcester South Society. Subject—"*Agriculture in its relations to the Sciences.*"

Prof. JOHN A. NASH, before the Worcester West Society. Subject—"*How to better Farmers.*"

JUSTUS TOWER, before the Worcester North Society. Subject—"*The Farmer's Position.*"

Rev. ALVAN LAMSON, before the Norfolk Society. Subject—"*Farming in some of its Intellectual Aspects.*"

By GEORGE. S. BOUTWELL, before the Barnstable Society. Subject—"*System of Agricultural Education.*"

By A. B. WHIPPLE, before the Nantucket Society. Subject—"*Forethought in Farming.*"

The attentive reader cannot fail to observe what a wide field of research is opened in the introduction of these topics, and what an opportunity is afforded to ingenious and cultivated minds to expatiate upon the advantages, charms, and blessings of rural life. Faithfully, and with sincere fervor, have our authors performed their part, and the bread which they have thus cast upon the waters, will surely come back to them, blessed and multiplied exceedingly. We cannot withhold an expression of our admiration of their labors, and of the personal obligation we feel for the noble efforts which they have made to raise the whole subject from the low state in which it had come to be considered, to its own proper rank and level.

The next division of the volume introduces the *reports of Committees upon Farms.* The first report is by Dr. GEORGE B. LORING, of Salem, one of the most accomplished public speakers and writers of Essex county, and if Madam Rumor is correct, he is just as accomplished in his stout boots, in the furrows, or on the *mowing machine (?)* as he is in the realm of letters. His report is upon farms, is not a dry detail of farm management only, but a running fire of useful thought and happy suggestions, showing all along how deeply he was imbued in his early years with both the prose and poetry of rural life. This report is followed by many statements from proprietors of farms, detailing their particular modes of culture, and giving results, some of which are valuable papers.

There is an excellent paper on "Farm Accounts," by P. N. RICHARDS, of Sunderland. Then follow papers upon "Reclaimed Swamps," "Improvement of Waste Lands," "Orchards," "Manures," "Wire Fences," "Indian Corn," "Wheat," "Rye," "Barley," "Oats," "Broom Corn," "Chinese Sugar Cane," "Root Crops," "Farm Implements," "Neat Stock," "Horses," "Sheep," "Poultry," "Bee Culture," "The Dairy," "Fruits and Flowers," a paper of rare excellence, full of beauty and genial feeling, and what may be of consequence to some, full of information how to coin shining gold. "Vegetables," and "Maple Sugar." A paper upon "*Inquiries in relation to Experimental Farming,*" by WILSON FLAGG, and one upon "*Artificial Planting of Trees,—its Importance and Benefits,*" by Rev. JOHN L. RUSSELL, close the volume. These papers, excellent in themselves, form a fit ending to a volume of so much excellence.

When we have said that a good index to the Secretary's Report, and to the miscellaneous papers that follow, is given, we have only to add that we close the volume with feelings of sincere gratification and pride.

HOW MUCH HORSES FEEL.

Mr. Rowell relates some horrible cases in which horses had broken their bones at the fetlock joint and were compelled to walk upon their stumps, with their fore-feet turned up, as we should turn back our legs to walk upon our knees, and yet continued to graze quietly till they were dispatched. But assuming the particulars to be accurately reported, and they did not fall under the observation of Mr. Rowell himself, we attach little importance to them. He acknowledges that horses are keenly alive to the stroke of the whip, the prick of the spur, and the sting of an insect. That they are peculiarly sensitive to lameness is also a matter of every-day experience. They groan when they are wounded on the field of battle, and by their looks and their restlessness betray great uneasiness when the lacerated flesh begins to inflame. The absence of pain in particular instances of extensive injury can only be temporary, in the same way that the soldier is often unconscious for a time that his arm has been shot off, or a ball been lodged in his body. The numbness which appears to be produced by the concussion passes away, and the sensitiveness is to be judged by the suffering which ensues at a subsequent stage. Horses, no doubt, feel less then men, but they feel a great deal. It is impossible, however, to gauge with precision the degree of anguish which is allotted to each grade of animal life. There are circumstances in every case which must be experienced to be understood, and to estimate truly the condition of worms or quadrupeds, we must become worms and quadrupeds ourselves.—*London Quarterly Review.*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FOWL MEADOW, OR FALSE REDTOP.

1. Spikelet, magnified. 2. Flower. 3. Germ.

Some months since we gave an engraving and description of the "*Orchard Grass*," intending at that time to introduce other varieties of the Grasses from time to time, as opportunity and space would permit. We now have the pleasure of presenting the reader with a beautiful illustration of one of the finest and best grasses of New England, the *Fowl Meadow, or False Redtop Grass*. We copy the description from FLINT'S Work on the "GRASSES AND FORAGE PLANTS," recently published.

The specific characteristics of this species are two to four, sometimes five, flowered spikelets, oval, spear shaped, ligules elongated, flowers acutish, green, often tinged with purple, roots slightly creeping; wet meadows and banks of streams, very common. Flowers in July and August. In long continued moist weather the lower joints send up flowering stems. The panicle is erect and spreading when in flower, but more contracted and drooping when ripe. It is perennial. Native of Germany.

It early commended itself to the attention of farmers, for Jared Eliot, writing in 1749, says of it: "There are two sorts of grass which are natives of the country, which I would recommend, —these are Herds-grass, (known in Pennsylvania by the name of Timothy-grass,) the other is Fowl Meadow, sometimes called Duck-grass, and sometimes *Swamp-wire Grass*. It is said that Herds-grass was first found in a swamp in Piscataqua, by one Herd, who propagated the same; that Fowl Meadow-grass was brought into a poor piece of meadow in Dedham, by ducks and other wild water-fowl, and therefore called by such an odd name. It is supposed to be brought into the meadows at Hartford by the annual floods, and called there Swamp-wire grass. Of these two sorts of natural grass, the fowl-grass is much the best; it grows tall and thick, makes a more soft and pliable hay than Herds-grass, and consequently will be more fit for pressing, in order to ship off with our horses; besides it is a good grass, not in abundance inferior to English grass. It yields a good burden, three loads to the acre. It must be sowed in low, moist land. This grass has another good quality, which renders it very valuable in a country where help is so much wanting; it will not spoil or suffer, although it stand beyond the common times for mowing. Clover will be lost, in a great measure, if it be not cut in the proper season. Spear-grass, commonly called English grass, if it stands too long, will be little better than rye straw; if this outstand the time, it is best to let it stand till there comes up a second growth, and then it will do tolerably well; but this fowl-grass may be mowed any time from July to October. * * * This I wondered at, but viewing some of it attentively, I think I have found the reason of it. When it is grown about three foot high it then falls down, but doth not rot like other grass when lodged; in a little time after it is thus fallen down, at every joint it puts forth a new branch; now to maintain this young brood of suckers there must be a plentiful course of sap conveyed up through the main stem or straw; by this means the grass is kept green and fit for mowing all this long period."

This grass grows abundantly in almost every part of New England, especially where it has been introduced and cultivated in suitable ground, such as the borders of rivers and intervals occasionally overflowed. It will not endure to be long covered with water, especially in warm weather. It is well to let a piece go to seed, save the seed and scatter it over low lands. It makes an excellent grass for oxen, cows and sheep, but is thought to be rather fine for horses. It never grows so coarse or hard but that the stalk is sweet and tender and eaten without waste. It is very easily made into hay, and is more nutritive, according to Sinclair, than either foxtail, orchard grass, or tall meadow oat grass. Owing to its constantly sending flowering stems, the grass of the lattermath contains more nutritive matter than the first crop at the time of flowering, hence the names *fertilis* and *serotina*, fertile and late flowering meadow grass. It thrives best when mixed with other grasses, and deserves a place in all mixtures for rich moist pastures.

COOLING ROOMS.

The warm weather will shortly be here, and every one will be seeking the refreshing influence of a cool and shady place, whereunto they can retreat from the blazing sun; so we will give our readers a few hints concerning the cooling of their houses. The first necessity is a thorough draft. This can always be obtained by opening every door and window in the basement, the top of every window above, and by throwing each door wide open; but above all, be sure that the trap door in the roof is open, and there is plenty of air room from it down the stairs, so that whatever be the direction of the wind, there will at least be one ascending current of air in the house. Another requisite is shade. Our common slat shutters answer well for the windows, but the cheapest and most convenient shelter for the roof is to cover it thickly with straw, dried reeds, or rushes. These will resist the influence of the noonday sun, and keep the garret almost as cool as the basement. One of the most simple methods, and at the same time the cheapest means of artificially lowering the temperature of a room, is to wet a cloth of any size, the larger the better, and suspend it in the place you want cooled; let the room be well ventilated, and the temperature will sink from ten to twenty degrees in less than half an hour.

The above hints will be useful to many, and as a last suggestion we will inform the reader that, in summer, it is well to keep a solution of chloride of lime in the house, and occasionally sprinkle it in the more frequented parts, as the passages and stairs.—*Scientific American.*

BRIGHT BOY.—Not long since some ladies walking in the garden of an eminent divine, who has been classed among the transcendentalists, saw his little boy scraping up the path with an old table spoon. "What are you doing, my little boy?" inquired one of the ladies. "O," said the young offshoot of transcendentalism, "I'm digging after the Infinite."—*N. Y. Post.*

For the New England Farmer.

BEE CULTURE.

MR. EDITOR:—During the last summer, I sent you a few short articles on the above subject, which you had the kindness to publish. It was my intention at that time to continue the subject until I had gone through with all its departments. But quite a number of experienced apiarists, to whose judgment I defer, took up the pen, and cast "your humble servant" quite in the shade. When I have grown wiser in the business, I may resume. My present object is to call the attention of the readers of the *New England Farmer* to their bees, if they have any. "The winter is over and gone, and the singing of birds has come," and a little attention bestowed upon your bees *now*, will pay a handsome return when the honey harvest is over.

Last fall, when putting my bees in their winter quarters, I tried Mr. Quinby's plan—that is, I put my hives in a cool, snug, dark room, well ventilated, and turned the hives bottom up, and kept them so until a few weeks ago. That winter management is good, which preserves your bees and brings them to spring in a sound and healthy condition, and not greatly reduced in numbers. I cannot say but my swarms have come out well this spring; they did, with one exception, and probably I lost that by some experiments which I subjected them to. Still, I do not like the Quinby plan of turning the hives bottom up. There is no mistake but by so doing you get rid of the *moisture* generated by the breath of the bees. I examined my hives a number of times during the coldest weather, and never saw *any* moisture in or about the hive. But this moisture can be got rid of equally as well in another way, and not be liable to the objection which the "bottom up" plan has; by this treatment, all the filth and dirt of the bees, dead bees and all, is retained in the hive, and I found it almost impossible to clean them so as to make them fit to be seen. Mine were all chamber hives, which must be more favorable for the "bottom up" plan, than with hives without a chamber.

Now my hand is in, let me say a word about hives. I have four different *patents* in operation, but I have about come to the conclusion that between "Patent Bee Hives"—*moth proof* included—and "Humbug," there is no great difference. If you have a hive like Bevan's cross-bar hive, with a chamber to it, and the lower part, or living room, about twelve inches square, thoroughly made and painted white, don't spend your money, thinking to get any thing better. During the past few weeks of pleasant weather, those who have taken notice have found their bees hard at work, coming in from the fields with their baskets loaded down with pollen. Of course your hives are on their stand, and have been these three weeks. See that your hives are thoroughly cleaned, particularly the bottom, and all filth removed from every part. This saves your bees a very hard job. You have also weighed your hives, or by some other means satisfied yourself that they have plenty of *stores* to carry them safely into the honey season; if they are deficient, supply them at once. Every few days, I put in the outer channels of the chamber, two tablespoonfuls of honey, and let it run where it pleases. This "*strikes* the fancy" of the bees, makes them bestir themselves, and is said to promote early swarming.

During the middle of the day, just pass around among your hives and see that there is no robbing going on, and bees are more prone to rob each other at this season and in the fall than at any other time. I take the precaution to contract the entrance to all my hives to one inch, and keep it so until the weather becomes quite warm. If the farmer wants a good crop he must use the means to produce one; if he does this, nothing will prevent its coming, but "the hand of God." So in bee-culture, they must have the care and attention of the master; it is not much they need, but this *little* they must have, or there is no success; with it, nothing pays better in the whole range of the farm of the same cost.

Now, friends of the bee, just give them this care for a few weeks, and then they will care for themselves. I am often inquired of as to the price of a swarm of bees, including a good hive. I don't know. I have always sold mine in the spring, about this time, for ten dollars; never have sold any without a hive, but should suppose six to eight dollars a fair price. NORFOLK.

King Oak Hill, April, 1858.

THE TROUT.

In some remarks made before the Farmers' Club in New York, by Robert L. Pell, Esq., we find the following interesting information concerning this highly esteemed fish:

"The trout is the only fish that comes in and goes out of season with the deer; he grows rapidly, and dies early after reaching his full growth. The female spawns in October—at a different time from nearly all other fish; after which both male and female become lean, weak and unwholsome eating, and, if examined closely, will be found covered with a species of clove-shaped insects, which appear to suck their substance from them; and they continue sick until warm weather, when they rub the insects off on the gravel, and immediately grow strong. The female is the best for the table. She may be known by her small head and deep body. Fish are always in season when their heads are so small as to be disproportioned to the size of their body. The trout is less oily and rich than the salmon; the female is much brighter and more beautiful than the male; they swim rapidly, and often leap, like the salmon, to a great height when ascending streams. When I first stocked my trout-pond, I placed 1500 in it, and was accustomed to feed them with angle-worms, rose-bugs, crickets, grasshoppers, &c., which they attacked with great voracity, to the amusement of those looking on. They grow much more rapidly in ponds than in their native streams, from the fact that they are better fed, and not compelled to exercise. Trout are the only fish known to me that possess a voice, which is perceived by pressing them, when they emit a murmuring sound, and tremble all over."

CURCULIO.—Mr. Walker of Kentucky, through the Ohio *Valley Farmer*, suggests the following remedy:—"As soon as the fruit is attacked take a tin-pan, into which soap-suds has been placed

to the depth of an inch or two; place it in the tree and place a small glass globe lamp in the middle of the pan, which permit to burn all night. In darting towards the light, the curculios strike the glass, and are precipitated into the liquid, from which they are unable to extricate themselves."

For the New England Farmer.

"RAISING CANE."

MR. EDITOR:—If you are not already weary of the accounts of cane-raising experience, I should be glad to give you the result of my own experiments. You know we read the newspapers here. Well, last winter there came to us from the north, east and south, such glowing descriptions of the results of Sorghum-raising that our little village was thrown into quite an excitement upon the matter. One gentleman procured a good deal of seed from Washington and distributed it, and others sent to Boston and bought it in larger quantities. The price of sugar and molasses were daily on the rise, till we began to fear that pies and cake would be reminiscences, not present realities; besides, the Yankee spirit of independence was up, and we were ripe for a trial. Now, just as Spring came on, I had a piece of land given to me for cultivation if I wished so to use it. There was a quarter of an acre. So enthusiastic had I become from much reading of Sorghum reports that I would gladly have filled all my space with the seed. But having never held the plow or hoed corn, I could not cultivate my land in person, and felt troubled as to how my pantry was to be supplied with syrup. Fortunately we have a neighbor, a staid, worthy deacon, who thoroughly understands farming, and when I told him about my land he kindly offered to "take it to the halves," as we call it here in the country. Now this pleased me very much, but how in the world should I manage about my "*Sorghum Saccharatum?* I had a strong suspicion that the deacon would laugh at "hobbies" and "newspaper farming," and it was therefore with a very modest manner that I said, "Deacon, I should like very well to try a little of the new sugar cane."

"Yes, yes," said he, "so should I; I have read a great deal about it in the papers, and 'sugar has ris' so much that it will be quite an object if we can make some ourselves." Unfortunately, as I then thought, potatoes, too, "had ris," and in the Deacon's judgment it would be well to raise a few bushels and a little corn.

We consented, at the same time thinking how nice it would be if we could have it all in sugar cane. "Sugar cane" on our New England soil! How it would remind us of the sunny tropics. But with a wonderful degree of reticence we limited ourselves to two hundred and thirty-four hills of the sorghum.

Time passed—corn and potatoes grew apace, while the sugar cane plants looked like poor sickly little foreigners, in an uncongenial clime. Our manure was guano and hen manure. In a few weeks, however, the sugar cane began to "pick up," and look around, as if astonished to find such a hot sun in our skies; it grew apace, leaving its country cousin, the Indian corn, quite in the shade. And now, indeed, we rejoiced in our goodly crop, and the Deacon would sometimes come by five o'clock in a summer morning and smack his lips in anticipation of the sweet juices that were maturing in the rapidly growing cane. Why, Mr. Editor, you could almost *hear* it grow, as to *seeing* there was no mistake. The Deacon counted the stalks, and calculated three half-pints of juice to every hill. He now took little heed of corn and potatoes—they were old acquaintances, and forsaken for our more showy stranger.

When Autumn came, as good luck would have it, a neighbor who lived on the river a short distance from the village, constructed a small mill, consisting of two horizontal iron rollers for crushing the cane, and two feeding rollers. Near this he put up a boiler for preparing the syrup. I wish, Mr. Editor, you could have gone with me to "Uncle Noah's," in syrup time. You would have enjoyed it. He is a wide-awake man, dead-set against all tyranny, from that of the Russian Czar down to our birch-loving district school master. It would disturb him to see a woman vote, and if he was town lister, would have no desire to assess a tax upon the small, hardly-earned property of a widow or maiden lady. No, he firmly believes that taxation and representation should go together. He says that with all the new spectacles he can procure he can't read the Declaration of Independence in any other way than that all men have a right to life, liberty and pursuit of happiness, and he is so stupid that he don't know what Mr. Choate means by "glittering generalities," for to him they are plain truths. It would have pleased you to see him crushing the cane.

He was to take our cane and manufacture it for one-half of the syrup. We had seventy gallons of juice, but from these seventy gallons we obtained but seven gallons of syrup. There came a sudden, early frost, which injured the cane so that we thought it would not yield so much saccharine matter.

You will perceive that our share from the 234 hills was three and a half gallons. Now the deacon had to strip the leaves from all the stalks before they could be crushed, and the frost had made them adhere closer, and increased the labor. Then there was the expense of transportation to and from the mill, all of which brought up our three and a half gallons of syrup to quite a respectable price. At last it was completed, and the deacon tasted—we tasted, the children tasted, and one looked at the other, then we tasted again, then a silence. I wanted to say it was good, but I couldn't tell a lie. The deacon finally said he liked it, and he thought the more one ate of it, the better they would like it. We tried the experiment, and kept a tumbler of it near us through the day, and occasionally tasted as we have seen old women do with herb tea, but our palates were inexorable; we could not like it, and finally we told the deacon if he would take the whole for the labor of preparing the stalks and the expense of transporting them to the mill, we would conclude the bargain. He assented, and we thought he had the hardest share, if he was to eat the syrup. So you see, Mr. Editor, we furnished land, seed and manure—and learned wisdom. I ought to add that our Indian corn was good, and ripened very well, notwith-

standing the wetness of the season. The potatoes were very fine, mealy and delicious, with no symptoms of disease. These good old friends were true to us, and if I farm it again, I shall cultivate their acquaintance more closely.

We used to scold a little, Mr. Editor, because you were not more sanguine about the results of Sorghum, and thought your cautiousness very largely developed. A. E. P.

Springfield, Vt., 1858.

REMARKS.—We yielded a good deal of space last year for a fair discussion of the merits of the Chinese sugar cane, advised our friends to try it in a small way, and have more recently given many accounts of results in various quarters,—and the conclusion we have come to is this:—When molasses is 75 cents a gallon in the winter or early spring, and the prospect is strong that it will remain so, it will be wise for those who have light, early land, to cultivate the cane.

We give the above article because the story is so pleasantly told, and because its results are probably those of nine cases in ten wherever the trial was made in New England. We do not care to occupy much more space in our columns on this subject, at present.

For the New England Farmer.

PEARS ON THE QUINCE AND APPLE.

"Where is the benefit of thus cultivating?" asks your correspondent "Essex," considering the trees are to be set so deep that roots may start anew from the pear stock. As quince roots will cause an earlier bearing, and continue to bear during the development of pear roots, we ultimately get pear trees on their own permanent roots, which have borne from the time they were three or four years old—which is not the case with original pear stocks.

But "why not graft on the apple stock?" further inquires your correspondent. The affinity between the pear and apple is not so close as between the pear and the quince; and although the pear takes well on the apple, it is *very short lived*—much shorter than when on the quince, under the most unfavorable circumstances. Perhaps if the pear were grafted low on the apple for the purpose of re-rooting, it might not live to accomplish it—though I have heard of one person who has tried it with some degree of success. A few years ago I grafted about a dozen of young apple stocks with the pear, about a foot from the ground. Though growing well for a year or so, they soon died, and only the Jargonelle bore one early specimen, and then also perished. I have since grafted some apple stocks close to the ground, to ascertain if they can be easily re-rooted. I have heard that fine specimens of the Seckle pear have been grown on the standard apple tree; it is thought, however, that this is an anomaly. Perhaps most any pear might be made to bear a few fruit on a bearing apple tree, as the union need not last long to effect it. Some one exhibited, during the last autumn, at the Massachusetts Horticultural Society, a very handsome Flemish Beauty pear, grown on the apple. Such unions being short, are not profitable.

I confess I have some sympathy with "Essex" in his implied distrust of the "little quince." Where, however, persons are planting a fruit garden, they are generally impatient to see their pear trees bear. In such cases, it would be well to set a few on the quince, being careful to plant them in a rich soil two or three inches below the junction.

Query.—As the pear will grow on the quince, the quince will probably grow on the pear. Has any one tried this on a standard pear? If the union would last any length of time, it might be advisable, as the quince-borer would be avoided, and the trees would present a full, weeping top.

W. Medford, April, 1858. D. W. L.

For the New England Farmer.

HOW THEY FEED THEIR CROPS IN MARBLEHEAD.

MR. EDITOR:—As some of your readers may like to know what we call high farming down our way, I send the following "table of contents" of several heaps of compost on the farm of Mr. SETH HATHAWAY, of this town. These masses of manure were fourteen in number, having a diameter of from ten to thirty feet, with an average depth of about four feet, and were all designed to be applied to between fourteen and fifteen acres of tillage, devoted mostly to onions and cabbages. Contents, viz.:

Glue manure	30 cords.
Night soil	28 cords.
Rotten kelp (see manure)	10 cords.
Beech sand	10 to 12 cords.
Muck and surface soil	14 to 16 cords.
Lime grounds,—being the sediment—remaining in the pots in which skins are prepared for the manufacturing of glue	11 cords.
Bone manure	6 to 8 cords.
Waste onions, which did not fully bottom last year	250 barrels.

With such data before them, I think some of your readers may cease to wonder at the mammoth cabbages, onions, and other vegetables which have made Marblehead famous in Boston market, and made the names of her handful of farmers occur so frequently as successful competitors in the reports of the Essex County Agricultural Society. * * Mr. H. works up and combines his glue manure most thoroughly and minutely with composting materials, and in this state, considering its strength and durability, estimates it at nearly double the value of barn manure; yet his father-in-law, a glue manufacturer, informs me that within three years he has had difficulty in disposing of it to farmers at $2 per cord! I intend to keep my eye on Mr. Hathaway's acre, and, perhaps, by-and-bye, may report how such manuring pays. Whatever returns she may make him, we will all agree that he does not design to cheat mother Earth.

Marblehead, Mass. J. J. H. GREGORY.

CHALK FOR WARTS.—A correspondent—W. H. Bennett, of Warwick, R I., informs us that by rubbing chalk frequently on warts, they will disappear. In several instances known to him in which this simple remedy was tried, it proved successful. We have known slightly moistened pearl-ash to remove warts by rubbing it upon them.—*Scientific American.*

SEEDTIME AND HARVEST

BY J. G. WHITTIER.

As o'er his furrowed fields which lie
Beneath a coldly-dropping sky,
Yet chill with winter's melted snow,
The husbandman goes forth to sow;

Thus, Freedom, on the bitter blast
The ventures of thy seed we cast,
And trust to warmer sun and rain,
To swell the germ, and fill the grain.

Who calls thy glorious service hard?
Who deems it not its own reward?
Who, for its trials, counts it less
A cause of praise and thankfulness?

It may not be our lot to wield
The sickle in the ripened field;
Nor ours to hear, on summer eves,
The reaper's song among the sheaves;

Yet where our duty's task is wrought
In unison with God's great thought,
The near and future blend in one,
And whatsoe'er is willed is done!

And ours the grateful service whence
Comes, day by day, the recompense:
The hope, the trust, the purpose stayed,
The fountain and the noonday shade.

And were this life the utmost span,
The only end and aim of man,
Better the toil of fields like these
Than waking dream and slothful ease.

But life, though falling like our grain,
Like that revives and springs again;
And, early called, how blest are they
Who wait in heaven their harvest day!

SUGGESTIONS ABOUT HAYMAKING.

Some things I know, and others I should like to know. I know that this life is too short to learn everything that a farmer should know by actual experiment; therefore it is necessary to profit by the experience of others by reading. I would therefore recommend that every farmer who can should take and read the *Country Gentleman* or *Cultivator*, and as many other agricultural papers as he pleases. I think it pays well. Knowledge and Industry are what elevate the farmer, or one man above another. I know that horses and cattle like early cut hay better than that which is cut late. They will fatten on it by giving them what they will eat, while they will barely subsist on that which gets dead ripe before it is cut. Cows which go to pasture early in the spring will make yellow butter, and so they will in winter if fed on early cut hay, if it be well cured. It is more work to make hay of early cut grass, than that which stands and dries up before being cut. It is an old adage, "to make hay while the sun shines." I think hay dried in the shade, is more fragrant and better than if dried in the sun. But in haying time we are in haste to dry it as soon as possible, and get it into the barn out of the way of the rain. I have noticed that women who have occasion to gather herbs for winter use, usually gather them when in blossom, and dry them in the shade. I believe it is correct. If it be so with herbs, is it not so with grass? I don't know which will pay best—to cut meadows once or twice the same season. I think it will be better to cut twice; and I think the quantity will be as much or more on the right kind of land, if cut twice the same season. I do not know but grass would be more likely to kill or die out, if cut twice a year; think it would; but would it not pay to reseed it every two or three years?

I wish you would persuade John Doe or Richard Roe, or some of those big farmers who own a hay-scale, to take, say two acres of meadow ground, cut one acre early so as to cut it twice the same season, and the other acre to cut but once, and weigh it in and weigh it out again on feeding, and feed it to two steers or cattle of nearly equal size, and weigh them every few days, so as to determine which is the most economical plan, or which will pay the best. I should like to see the result of such an experiment in the *Country Gentleman.—Country Gentleman.*

For the New England Farmer.

LETTER FROM MR. FRENCH.

THE ALPS AND GLACIERS.

My Dear Brown:—On the 12th day of August, at about six o'clock in the morning, my three Canadian friends and I, on our mules, and with a liberal supply of guides and mule-drivers, left Martigny to cross the Alps by the Tete Noir pass to Chamouni, in Sardinia. It is called a ten hours' ride, for nobody in these countries has any other idea of distance than by the time occupied in travelling. The morning was clear and warm, and as we wound along in single file up the narrow path, we often turned to gaze with admiration at the picturesque valley of the Rhone which stretched many leagues away behind us, and at the snowy mountain peaks which lifted their heads in the far distance.

Soon, however, the winding pathway led us among the high hills, and amidst forest trees which shut out all prospect in the rear, and overtaking a party consisting of an English gentleman and his wife and sister, and an American clergyman, we were soon mingled in one party, sometimes walking down the hills too steep for comfort or safety, sometimes conversing at the top of our voices, as we filed along on our mules, and so making the most of our new acquaintances, till we reached the Barberine house, a little more than half way, where we left our mules and proceeded on foot.

We soon caught our first glimpse of Mont Blanc, towering up clear and white in the sunlight, magnificent in the distance. Then we came close down upon the Argentine glacier, sloping quite into the valley, in the gorge of the mountains, a strangely grand sight, of a field of snow and ice, extending for miles from the regions of perpetual snow, like a frozen river of a mile or two in width, down to where the wheat and oats were ripening in the August sultry sun.

After dinner at Chamouni, at the London Ho-

tel, over which the American and English flags were waving to attract just such patriots as ourselves, we walked up to the small church and into the fields, and sat down upon the grass, and watched the sunlight on the mountain peaks, glistening like silver with rainbow hues, as the shadows from the valleys crept softly up the hillsides. There was no cloud or mist around the lofty peaks, and one by one the twilight cast her mantle over them, till the brightness of all was dimmed, except one distant lofty summit which before had seemed no higher than the rest, but now we saw, as the sunlight still glanced from this, when all the rest of the world had sunk into shade, that Mont Blanc, with his glorious forehead bathed in light, looked down on all around him. Next day was clear and bright, and, as I watched the sunrise on the mountains which rise almost like a wall on the east of the valley of Chamouni, every wave of the ocean of snow which covers them was plainly visible. We took an early start on foot up Mt. Anvert, by a steep and crooked path, and there at about three thousand feet elevation above the valley, and eight thousand above the ocean level, we looked down upon the famous Mer de Glace. This is one of the glaciers, and here about three miles above the lower end of it we crossed to the other side upon the ice. The passage did not seem to me either difficult or dangerous, though some of our party availed themselves constantly of the helping hand of the guides to steady their steps.

It is a rough river of ice of about half a mile in width, not smooth, like ice formed where it lies, but rough and broken, as if a sea of ice of many feet in thickness had been broken up by a torrent and swept down from above, till it was jammed into the mountain pass in a perfect chaos of confusion. The guides have small flags posted up at intervals to indicate a safe pathway, and they carry hatchets with which they cut notches in the large masses of ice over which we climbed.

We passed close by large fissures where the masses of ice were separated, which appeared to be fifty feet in depth, and across narrow passes as if on huge cakes of ice set on edge. Stones and earth are in places mingled with the ice, and all this seems to substantiate the theory that these glaciers are formed by avalanches of snow and ice which slide from the higher peaks of the mountains.

Slowly, but surely, the whole mass slides down into the valley, where, at the end of the glacier, which juts out like a tongue between the green fields and pastures which almost touch its sides, a river of roaring, foaming water constantly rushes from beneath it. It is, as I have said, about three miles from where we crossed to the lower end of the glacier. Occasionally a guide or traveller falls into the deep fissures in the ice in crossing, and they say that it takes about forty years for those unfortunate individuals to make the passage out at the lower end, showing that the glacier moves at about the speed of three miles in that period of time. We were solemnly assured that there are three guides now on the passage, and that one of them is anxiously looked for every year by his posterity, and expected to come out in as good a state of preservation as the elephant that was found in Siberia, frozen up probably before the time of Noah.

After crossing the ice, we walked down on the other side, climbing along by the side of a perpendicular precipice, holding by a rope fastened with staples to the rock, for many rods, looking down all the way upon the glacier at our feet. The day was hot, and large masses of ice were constantly falling as the water beneath loosened the foundation, and occasionally a crash like the report of a field-piece, told that a great mass of ice had fallen off from the end of the glacier, which seems to stand some fifty feet high, and to preserve, by some means, a square wall at its termination. All through the day we had fine views of the mountains, and at night arrived at our hotel, after a rough walk of twenty miles, with less feeling of fatigue than a quarter of that distance gave us in our early attempts at pedestrianism.

The agriculture of this valley is not extensive. Crops of wheat and oats were growing in the narrow plains in the valleys. Flocks of she-goats, each with a bell on her neck, were driven at night home to the village to be milked. High up on the mountains we could see little villages of small cottages, where a few cows and goats are kept. Even in the midst of the mountain passes, where nothing but a mule can travel, there were away up above our path, houses and attempts at fields of grain. The hunters shoot chamois and some other kinds of mountain goats or deer. Where there are wider valleys, grapes are grown on the sunny slopes, but on the whole, the region about Chamouni is barren and desolate, and the inhabitants subsist mainly by the expenditures of travellers who are attracted thither by the wild beauty of the scenery. From Chamouni we took post-horses to Geneva, a long but pleasant day's ride of nearly fifty miles.

The scenery is picturesque and grand through most of the route, with fine views backward of Mont Blanc. We dined at Bonneville, and then journeyed on through a pleasant Rhine-like vine land down the river Arve till we reached the elegant aristocratic city of Geneva. Here again we seemed to have found one of those cities peculiar to continental Europe, devoted, like Brussels and Paris, to luxury and elegant amusement. Beauti-

ful walks among trees and fountains and statues ornament the shores of the lake in front of the stately and palace-like hotels. In the evening, bands of music surrounded by parties of elegantly dressed ladies and gentlemen, were performing in a garden by one of the bridges, while graceful pleasure boats were gliding from point to point on the lake. This, however, is but the outside impression of Geneva, a city famed for its devotion to science and learning as well as the arts, and famous as the residence of Calvin, and as the head-quarters of the Puritans.

In a former letter written at Lyons, I have hastily sketched my journeyings to that city, and if in this or others of my letters, repetitions or omissions are noticed, it should be borne in mind, that what I have written abroad has been in haste, and almost on the wing, and that no copies have been kept. The freshness of a first impression has seemed to me of more interest than a more careful narrative from notes or revised correspondence. H. F. F.

For the New England Farmer.

BUCKWHEAT BRAN AND STRAW—OX-YOKES.

Mr. Brown:—I wish to know if there is any virtue in buckwheat bran? I have fed it mixed with oats, to horses, putting in about twelve quarts of bran to one bushel of oats, and am confident that it has been injurious to the animals; had I fed the oats clear, I have no doubt the same quantity would have put the horses in better condition.

I have heard it remarked that buckwheat straw used as bedding for hogs would eventually cause their death. Is it so?

I would like to inquire what is the best kind of a yoke for oxen to work in, i. e., a long or a short one? I am told by one they will work the best and draw the most in a short yoke; another says the reverse. My opinion is that it depends upon circumstances; if a pair of cattle are equal in strength to each other, they will work to the best advantage in a long yoke. In matching cattle, the weight of each should be ascertained; this is the most essential point. Supposing their horns are not exactly alike, or one may be a little darker red than the other, what matter is it? If they are equal to each other in weight, they are apt to be equal in strength, and if they are equal in strength, when working in a long yoke, one will not be constantly behind the other, or crowding against the tongue. If they are not matched in this manner, it ought not to be said they are well matched. If you desire to work them in a long yoke, give the weak one the advantage, by placing him farther from the tongue, which can be done by boring the hole in the yoke farther from the centre. It is best, however, to give such cattle a short yoke.

Orwell, Vt., 1858. Edmund H. Benson.

Remarks.—Buckwheat bran, we understand, is nearly valueless as food. It is a hard, shelly substance, and rattles like a "pocket of walnuts," when shaken.

We can see no reason why lying upon buckwheat straw should be hurtful to swine.

Your remarks upon matching cattle and fitting yokes are valuable. Those subjects need more attention.

TOMATOES—SUPPORTING AND SHORTENING-IN.

Few gardens are now found unsupplied with tomatoes, but very few persons take pains to *cultivate* them. The vines are usually left to straggle *ad libitum*. This is both bad economy and bad taste. If tomatoes are planted in rows, a convenient plan is to put up stakes on both sides of each row, and nail on horizontal strips or slats to keep the vines perpendicular. They may be carried up to the height of three to five feet. By this means the vines will show much better, especially when covered with ripened fruit clustering thickly upon the sides. The fruit itself will be much superior to that matured on the ground and in the shade. Strong twine or wires may be substituted for the horizontal slats. A cheaper process of supporting tomatoes is to bush them, in the same manner that beans or peas are treated. Our own tomatoes are planted around the border of the garden, and trained upon the fence, the vines being upheld by strips of leather, doubled around the stalks and fastened to the fence with small nails.

Tomatoes are also benefited by *shortening-in*. Three-fourths of the mature fruit is produced upon a small part of the vine nearest to the root, say one-third or one-fourth of its length. It is recommended to stop the further development of vines after a fair supply of fruit is set, by clipping off the vines growing beyond. The clipping should not be carried too far, as a supply of foliage is required to gather food from the air. One of the most successful cultivators in our acquaintance made it a rule to let no vine extend beyond four feet from its root.—*Am. Agriculturist.*

BLASTING STUMPS.

The *Ohio Cultivator* relates the experience of W. A. Gill, of Columbus, Ohio, in clearing a field of stumps by gunpowder, which really appears to be a most powerful "stump extractor." He cleared a stumpy field of twenty acres cheaply and expeditiously, the following plan being pursued for each stump:

"Select a solid place in a large root, near the ground, and with an inch and a quarter augur bore in, slanting downward, to as near the heart of the base of the tap-root as you can judge; then put in a charge of one or two ounces of powder, with a safety fuse, and tamp in dry clay or ordinary tamping material, to fill the hole, some six inches above the charge; then touch fire to the fuse and get out of the way. The blast will usually split the stump into three pieces, and make it hop right out of the ground. If the charge is put in too high up, the blast will only split the top of the stump, without lifting it."

For the New England Farmer.

HOW FRIEND OLIVER RAISES PORKERS.

"Oliver's the hand to raise hogs," says Uncle Tom; "it does beat all natur how he will make the critters grow!" Holloa! Oliver, said I, is that so? Come, then, you must tell us all about it. "You see," said Oliver, "I always buys the mangiest, scouriest thing you ever did see, and yet I always gets a good pig out of him. When a drover comes along with a poor, weak, thin, sickly critter in his lot and I gets my eyes on him, why, I generally gets him at a bargain, and I soon sets him going towards being a fat porker. Now there's Mason, he had a poor, sick hog that had the scours as dreadfully as ever you did see; my conscience! there wasn't anything left of him! Well, you see, I went to Mason to know what he would take for him, but he was so awfully used up that he said he wouldn't sell him at no rate. So I gets him to bring him down to my place for a dollar, and goes to work on him. I goes up in the pastures and gets some hardhack and makes a strong tea of it, and pours it down his throat, and I didn't have to do it but twice before it cured him entirely; and then you had better believe I started him! In a week or two, I sold him to Reuben, and a splendid hog he made.

"Then, again, there's Ben Pritchard; he and I bought hogs out of the same drove; he gave six dollars for his two, and took his pick of the best, and I gave one dollar seventy-five cents for my one, and he was the poorest in the drove; he was as awful looking a critter as ever you seed. Well, Ben he comes over and looks at mine, and says, 'Oliver, why, what under the sun have you got here! I wouldn't take that hog for a gift!' I says nothing, but thinks I to myself, I'll give you a tussle to beat him, my boy, if it's a possible thing. Ben he used to pass by about dinner-time, and so sometimes he'd take a peep at my pig: well, pretty soon he began to stare rather hard. I used to see him, but I says nothing. By-and-by he would stare and stare and scratch his head dreadfully; and one day he says to me, 'plague take it, Oliver, I don't see how under the sun you do that!' 'Do what, Ben,' says I, for you see I pretends as though I didn't know what he meant. 'Why, how do you get that hog to grow so?' 'O, never mind about that, Ben,' said I, 'we'll just wait and see how he comes out.' Well, sir, when I comes to kill my hog, and I killed him ten days before his, mine weighed more than both of his together, and mine was a one dollar seventy-five hog and his two cost six dollars! Now what do you think of that?" I at once acknowledged, with emphasis, that it was a grunter of a story.

Now, Oliver, said I, you must tell us the secret of all this; how can you take the "tag-rag and bobtail" of every drove that comes along, and make such excellent porkers out of them? Now out with the facts, every one of them.

"Well," said friend Oliver, "I'll tell you the whole secret; it's just this: *Taking good care of the critters, and feeding them just what they like, with a little knack at getting as much inside of them as possible.* When I takes a poor critter, I makes it a point first to start him; so I first gives him a good scrubbing, once or twice, and I boils up some sweet corn and milk and feeds to him, or I boils up some hasty-pudding with milk and mixes a little molasses with it; just give them most anything they like best, to give them a start, and when they once gets started I gets inside of them all I can. For instance, I gives them some meal, and when they have eaten all that they will of that, I throw in a few clams or some fish or some waste stuff from the slaughter-house, and they eat that too; so I gets more inside of them, and that's what does the business. You see, get all inside of them you can get them to eat, by giving them something else when they have eaten their fill of one thing. As for making anything out of a hog by giving them meal, meal, meal, everlastingly, I don't believe in it."

Well, Oliver, said I, you have given us some ideas on hog-raising that have stood the test of practical experience; why don't you put your ideas on paper, for the benefit of the community? Why don't you pen them for some agricultural paper? "O!" said Oliver, "I am not used to that sort of business; it doesn't run in my line, you see."

So, Messrs. Editors, as it didn't run in friend Oliver's line to put his report on paper, I have attempted, humbly, to do it for him; and I have a notion that "Uncle Tom" will assent to it as very nearly a literal transcript. J. J. H. G.

Marblehead, Mass.

HOW TO DESTROY BRUSH.

The *Berkshire Culturist* replies as follows to some inquiries in our columns, as to the best method of destroying bushes in pastures:—

"Bush Whacker" may have some peculiarity relative to the location of his pasture and its connection with other lands of the farm which would be important to be known, and which it might have been well to have given. In the ordinary position of such lands we should feel competent to give a practical if not specific answer to the inquiry. It would be something like the following:

In the first place, see that there is a fence which will keep all cattle from breaking into the pasture. In the second place, see that no creatures are turned in. These are the main directions, and if the ground is literally covered with bushes, we care but little of what kind, this is all that is necessary. If there are large spots free from bushes, plow them as well as you can, sometime in the early part of the season, and as soon as the chestnuts, beech-nuts, acorns and other seeds of the forest trees are ripe, plant the spots with the seeds of such trees as are indigenous to the soil. An eye placed upon the neighboring forests, and especially such as are of second growth, will direct what woods it may be expedient to cultivate. Wait patiently twenty-five or thirty years, and you will find your present pests have disappeared, and in their place a wood and timber lot, which will enrich you and your children, and prove a blessing to all the community. If you still persist in making a pasture of it, you can then cut off the timber and sell it for enough to pay for land and interest. Burn the brush, and put on a flock of sheep; feed close two or three years, and you will have a fine, clean pasture.

We never yet saw a piece of stony ground covered with shrubs of any description, but had many young forest trees intermingled. These are often kept browsed down by cattle, but the short time required to make a forest of them is surprising to one who has not given attention to this point. There are many thousands of acres of rough land in this State which ought to be devoted to timber, and of all others—mountain ledges excepted—the old pastures, cold and heavy, full of stone and covered with moss, brakes and useless shrubs, stand first. This is, in our view, the only way in which these lands can ever be restored to fertility. Manuring is out of the question, and the extirpation of shrubs from rough, wet ground is next to impossible, and in the exhausted state of the soil, moss and brakes would soon fill their place were the shrubs destroyed.

For the New England Farmer.

HOW TO MAKE A GOOD SHINGLE ROOF.

MR. EDITOR:—An article on this subject in your November number for 1857, has led me to make the following remarks.

It appears that the writer of that article was a carpenter; I also am a carpenter; have had an experience of over fifty years in making and repairing roofs, and would wish to lay before your readers a few considerations as the result of my long experience.

In the first place, it is important, in order to make a tight shingle roof, that it should have a good pitch; forty-five degrees is none too much when it can conveniently be had; this, in a large building, may be a little too much to look well, but in small buildings more is better, both for looks and utility; it gives opportunity for the water to run off freely, and the roof soon dries. One reason why roofs decay so soon, and become leaky, is their flatness,—they hold the water for a long time; it penetrates the wood, the heat of the sun causes a kind of fermentation, and decomposition takes place, and the life and strength of the wood is soon destroyed.

Shaved shingles I conceive to be better than sawed, for this reason: they are free from that roughness which the sawed shingle possesses, serving as a sponge to hold the water, and causing the shingles to decay, and then the general surface of the shaved shingle is not so level as the sawed, and of course they do not lay down so close to the shingles below, which gives the air free circulation to dry the shingle, which prevents it from rotting.

Another thing in favor of shaved shingles, is, they run with the grain of the wood, and do not so readily absorb the water as the cross-grained, sawed shingles.

It is my opinion that a roof covered with shaved shingles will last a third longer than one covered with sawed shingles made out of the same kind of stuff.

Various methods have been tried to prevent shingles from decaying when laid, but all have not proved alike successful. Smearing over with tar has been tried, but has not succeeded well. Painting roofs after they have been shingled has been tried, but this is really worse than useless. Oiling or painting shingles and drying them before they are laid, is a good way, but is too expensive for common use. A better and much cheaper way is to make use of lime. In the course of my experience and observation on roofs, I have always found that where shingles have come in contact with lime, they are in a much better state of preservation than where they have not been exposed to it; even the small quantity that comes off a whitewashed chimney, in the course of years, will have a surprising effect on the shingles around it. There are three important advantages to be derived from making use of lime on shingles.

The first is, it preserves the shingles in a good degree from moisture. Whoever will take the pains to examine a well whitewashed roof in the morning when the dew is on, will readily see that the moisture does not penetrate through the whitewash, and thus it serves as a shield to prevent the shingles from the decaying effect of wetting and drying, and although it is not a perfect preventive from moisture, yet it, in a good degree, preserves the shingles from that process of wetting and drying to which unprotected shingles are exposed, and which is the great cause of the speedy decay of so many roofs.

Another important advantage from using lime on shingles, is, it fills the pores of the wood with the salts of the lime, which hardens the wood and renders it more impervious to the water.

A third advantage from the use of lime, is, it serves to keep the shingles clean from all impurities, and especially from moss, which so commonly grows on roofs, and which serves as a sponge to hold the water, and prevents the roof from drying.

In order to prepare the shingles for laying, I would observe—take a cistern or long tub, put in about half a bushel of unslaked lime, slake it with warm water, reduce it to the consistency of whitewash, immerse your shingles in the liquid, let them lay about two hours, take them out and cast them promiscously into a pile, let them remain two or three days, and they will be fit for laying. When the shingles are laid, whitewash the whole roof over anew, and you will have a roof that will do good service.

NEW HAMPSHIRE CARPENTER.

Derry, N. H., 1858.

DUST.

From whence does it all come? You may sweep your room twice every day, and you will find that a cloud of dust arises every time the broom and the floor make acquaintance. You may dust every article of furniture, every book, every picture; you may take care to shake your duster out of the window, and your own clothes out in the yard; you may wipe all about the book-shelves and the floor with a damp cloth; and yet after all your labor, there will be dust. Dust flying in the air; dust settling on the books and tables; dust on the pictures, on the flowers—dust, dust everywhere. It is discouraging.

You think, perhaps, 'tis because the room in which you sit is so large; you think that if you were in snugger quarters, there would not be much of this annoyance; you, therefore, move into a smaller apartment, but you are worse off now than you were before. You can't turn around

quick, nor even heave a sigh, without setting in motion ten thousand particles of dust. You may sweep till your broom fails, and dust till your arms fall off, and the story will be always the same. Even out at sea, where the good ship rides the billows thousands of miles from land, the dust gathers. It matters not how much the sailors rub the masts and holy-stone the decks, the dust will gather, even amid the salt spray of the sea. It is for ever flying and settling wherever there is any solid substance on which it can alight. Where it comes from is no mystery, when we remember what sort of things we are.

"Dust thou art, and unto dust shalt thou return," is written on clothing, on wood, and iron, and steel just as truly as it is on frail, perishing flesh; and the changing and sifting back to its despised original, is going on before our very eyes, in each thing that we look upon. Constantly—some rapidly, others with a slower waste, but certainly all things are returning whence they came. 'Tis enough to make one fear the dust, to make one feel a horror at the atoms falling on one's garments, and one's limbs, to read and understand their language. That language is all of decay and death; of earth, decay, and worms; of darkness, forgetfulness, and despair. This, if one cannot look beyond the dust, and see, and take hold upon, the eternal life.

How carefully, and purely, should we step through the world, did we but read, as we walk, all that is written for our admonition and warning. But we go hastily, with careless eye and dumb heart, taking little heed when we should be most studious. Many there be who have deep skill to read the dark sayings written on ancient rocks, who yet have never understood the plain language of the gathering dust.

TAXING DOGS TO PRESERVE SHEEP.

FRIEND HARRIS:—We keep two rifles and a doubled barrelled shot gun, and can level them with great precision on a sheep-killing dog, either moving or still, but mischief is most always done first. Our Ring is a very knowing little dog, and lives up to the top notch of his knowledge. He guards the house diligently, and never was inside in his life; we would pay a considerable tax rather than part with him. But he is liable at any time to go mad, and ramble through the neighborhood, leaving death and misery in his train.

What is the reason that sensible men do not view dogs as a dangerous species of property, and tax them accordingly? Instead of having an extra tax put upon them, they are not taxed at all. According to the common rules of taxation, they should be included in the assessor's list, but their dangerous propensities should entitle them to heavier tax. If a dog is loose at night, his owner has no control over him, fences are mere ropes of sand, and whenever mischief calls, he obeys her command.

If the Legislature were to pass a law requiring the owners of dogs to pay one dollar for each, annually, it would diminish the number of dogs, without increasing our taxes. It would only be transferring a small portion of the tax to dog owners, where it justly belongs. No reasonable man would grumble at paying one dollar for a good dog, considering the nature of his property. and a worthless one he would not keep.—MICAJAH T. JOHNSON., *Harrison Co., O.—Ohio Cultivator.*

EXTRACTS AND REPLIES.

CULTURE OF HOPS.

Why do you not give us the prices of hops in your "Review of the Market?" Several in this section are raising hops, and notwithstanding the present low prices, are not discouraged.

What kind of manure is best adapted to them? Are ashes good, and if so how should this be applied; alone, or mixed with manure or compost? How many vines ought to climb the pole? Will some one in the north part of this State, experienced in the business, please give us a lesson? Will it pay to sow salt broadcast on grass ground? If so, how many bushels to the acre? Also, if good for corn, and root crops, how used? Where can I get the King Phillip's corn for planting? A SUBSCRIBER.

Green River, Vt., 1858.

REMARKS.—We can add the price of hops to our price current, if it is desired.

We prefer that some practical producer of hops should reply to the questions relating to that crop.

Five bushels of salt per acre, provided it can be purchased very low, say less than 25 cents a bushel, will undoubtedly be profitable; and would be as much so on corn or root crops, probably.

The King Phillip or Brown corn is usually for sale at the seed stores.

A LARGE BARREN MEADOW.

I have a large barren meadow which nothing but grass will grow on; will you inform me, through your columns, the best way to proceed to get it into English grass.

Barton, Vt., 1858. J. P. ROBINSON.

REMARKS.—Drain it, so that no water shall stand within fifteen inches of the surface; then plow it if you can,—if not, "bog" it with a bog hoe, and plant potatoes one or two years. Then plow, level, manure and sow with grass seed as early in September as you can get off the potatoes. As a general thing, this process will increase the value of such meadows more than four fold. Be quite sure, however, not to take up at once, more than you can reclaim thoroughly, if it be but half an acre. Does not the "barren meadow" look better already?

MILK FOR BUTTER.

Mr. Secretary Johnson states, on the authority of Mr. Holbert, as the result of his inquiries in the great State of New York, (Trans., vol. xi., p. 232,) that it takes *fourteen quarts* of milk, on an average, for the production of a pound of butter. This, he says, is confirmed by the experience of Mr. Horsfall, of England. So much detail is given in confirmation of this statement, that its

correctness is not to be questioned. But such has not been the reports of dairy management in Massachusetts—not to speak of the *four-quart* products of Devon stock, in October. Why this difference? Is it in the animals, the pasture, or the management?

I have long been of the opinion, that our own native stock were as good for butter as any animals whatever, but I did not presume to say they were *twenty-five per cent.* better, which I should do, if the above facts are to be conclusively relied on. ESSEX.

May, 1858.

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WATER PIPES.

Will you have the kindness to inform me in regard to the best kind of pipe for bringing water to the house for family use, and where it can be obtained? Lead is poison and iron corrodes. Is there any thing better than logs? I believe I have seen an advertisement in the *Farmer*, or some other paper, of a cast iron pipe, lined with glass or cement and covered with the same, so that the iron will not corrode, and the water will remain pure. Is there such a pipe, and is it the thing wanted? If so, where can it be obtained, and what is the probable cost? Any information on this subject will be very gratefully received.

AUSTIN CONSTANTINE.

East Wallingford, Rutland Co., Vt.

REMARKS.—In the country, where logs can be easily obtained and at a cheap rate, we doubt whether anything more economical can be used. There is such pipe made as you speak of, but it would be quite costly compared with logs. Pipe is made of common hydraulic cement, thus; dig the trench, cover the bottom for a length of six or eight feet with cement, then lay a round stick on it of the size of the diameter of the pipe which you desire, and cement over and around it. In a short time the cement will set, then go on as before. But this must be below the frost. Upon the whole, you will be safest with logs from your own hills.

—

TO CONVERT BONES INTO MANURE.

Please tell me the best and cheapest way to convert bones into manure. D. ROBERTS.

North Adams, 1858.

REMARKS.—First break the bones as finely as you can. Then it can be done by covering them six or eight inches thick with unleached ashes, but the process will be a slow one. Take one part sulphuric acid, and *five* parts water, and mix the bones with it. If it does not form a sort of paste in a few days, add a little more acid. The acid is an excellent manure, and costs about three cents a pound, and is a liquid dangerous to handle, and must be used with care.

—

LEAKY COWS AND AFFLICTED HORSES.

Is there any remedy for cows leaking their milk, and if so, what it is? Also, what is the best remedy for sores on horses?

April 20th, 1858. A SUBSCRIBER.

MORE LAND AND LESS PRODUCTS.

I accept the authorities cited by Mr. TOWER, as an explanation for his statements, that while our acres of cultivated grounds within the State of Massachusetts had expanded *one-quarter*, our products had diminished *one-third*. If such has been the progress for eight years last past, it will not be difficult to calculate the time, when our products will be entirely unworthy of notice. I think there must be some error in the statistics. I cannot believe that our cultivators have thus been advancing backwards.

I hope measures will be adopted to mark these things with entire accuracy. It would be easy to require of each agricultural society, enjoying the bounty of the State, a specific return of the products within their limits. Let such returns be made upon the responsibility of the society, and on failing to be made in a satisfactory manner, let their portion of the State bounty be withheld, and all these things would soon be right.

A LOOKER-ON.

REMARKS.—We have no doubt our correspondent is correct in his belief that some "error exists in the statistics." In the first place, we believe that instead of our cultivated acres being expanded *one-quarter*, they have been *contracted* more than that, and that still our products have increased.

We have asked the question of gentlemen from all parts of the State, "*whether as much land is under tillage now as there was twenty years ago*," and the invariable reply is,—"No, we plow less land, but use more manures, and cultivate better; we have learned to find a better profit in allowing our rough pastures to run to wood, and pasture our cattle partly on land that we can plow and manure and re-seed. There is more wood-land than formerly, and less pasture and tillage land."

This accords entirely with our own observations and impressions. We think there is an *error in the statistics*, and wish some person of leisure and patience would take the proper step to correct it.

—

GROWTH OF WOOD FOR FUEL.

In answer to a correspondent who inquired about the best trees to raise for a crop of wood in the shortest time, I would say that the Silver Maple is the quickest growing tree and the easiest to raise of any with which I am acquainted. The River Birch is the next best. The seed of both are ripe about the last of May, or first of June, and should be sown as soon as ripe, and covered very lightly. The seed of the Maple may be found in Nashua hanging over the iron bridge near the Indian Head Company's Mills, and other locations in Tyngsborough, at the farm of D. P. Colburn. The seed of the birch may be had on the Merrimack River at Lowell, above the falls opposite the residence of Abiel Rolfe, Esq., or in Methuen, four miles above Lawrence, near the well-known Bartlett farm. I have raised one year seedlings of both kinds from one to two feet. B. F. CUTTER.

THE HORSE'S TAIL.

MESSRS. EDITORS:—Are not docking, pricking and pullying the horse's tail among the dying barbarisms of the day? Are not wise farmers, bungling jockeys, and fastidious horse fanciers, beginning to think a horse looks better for having a tail? Wonderful discovery all this, after all the persecutions practiced upon the horse. Who has not been in a position to say that decency forbids this mutilation? Could the poor animal remonstrate, he would say, my pride is humbled, my loins are weakened, and robbed of my most useful and becoming appendage, but to the instrument and mallet I must submit.

Why this passion for chopping of tails? Will you, Governor, answer this question? P.

Brooklyn, N. Y.

REMARKS.—We hate all *barbarisms* on humans or anything less. Dr. DADD can best reply, if he will.

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DRUMHEAD SAVOY CABBAGE.

Can you inform me where seed of the Drumhead Savoy cabbage (the genuine article) can be procured? F. KEITH.

No. Easton, Mass., April 26, 1858.

REMARKS.—We can only refer you to the seedsmen at the agricultural warehouses.

—

A PROLIFIC SOW.

I have a breeding sow which has dropped eighty-six pigs at five litters as follows; April 8, 1856, 17; September 4, 15; April 4, 1857, 16; August 22, 16; April 16, 1858, 22; 64 of these 86 within the short term of 16 months and 14 days. C. P. WARD.

East Poultney, Vt., April, 1858.

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

The Robin *(Turdus migratorious)* is perhaps more generally known in the United States than any of our birds, and has been noticed by travellers and naturalists, from the earliest discovery of the country. Josselyn, in 1663, in his list of singing birds, speaks of Thrushes with red breasts, which are very fat and good meat. Kalm, in his travels in 1748, has given us a rude cut of the Robin, or as he calls it, Red-breasted thrush, and says it is very different from the Robin of England. He says it sings melodiously, is not very shy, and hops on the ground. It was noticed by Dr. Latham, under the name of the Red-breasted thrush in 1783; by Catesby, in his "Natural History" of Carolina, in 1748, where he calls it the Fieldfare; by Jefferson and Bartram, in their catologues of our birds, and by Pennant, in his "Arctic Zoology", in 1785, where he says, at Moose Fort, these birds build their nests, lay their eggs, and hatch their young in fourteen days. Hearne, in his journey to the Northern ocean, says of the Robin, that it is called at Hudson's Bay the Red-bird, and that they are not numerous. Dr. Richardson says the Robin inhabits every part of the fur countries, as high as the 67th parallel, and that it comes in company with the Blue-birds and Grakles in spring, to the shores of the Great Bear lake. Gosse says the Robin is found in Newfoundland, where it is very common, and is always called the Blackbird.

The habits, instincts, and migrations of the Robin are interesting, especially those connected with the rearing of its young. It builds a very substantial nest with great care and labor, erecting its mud wall upon the true principles of masonry, so that it is capable of affording a safe and comfortable domicile for its two or three broods of young, during the season, and withstanding even the storms of the following winter.

How wonderful is the instinct that prompts birds to build their nests in such a variety of forms, and from such different materials. We know not why a Robin should consider its nest unfinished, until it is neatly plastered with mud, and a wild Pigeon content itself with a nest consisting of a slight scaffold of a few dry sticks, carelessly placed upon a limb of a lofty oak, and feel secure in thus rearing its young. Our bird under consideration, in some of its habits, may be considered as truly American, in accomplishing a manifest destiny by its constant increase, and by its filling the whole country and much of its adjoining territory with its species, and also from its constant residence in the Union, only migrating from one part of the country to the other to procure its food, or to avoid the inclemency of the season.

Many of our birds migrate upon the approach of winter beyond the limits of the United States, and are only summer residents, but the Robin can be found in some localities even in Massachusetts, during the whole season. Its marauding inroads upon our gardens, and the impudence with which it partakes of our fruits, has given the bird a bad reputation. This aggressive trait of character which we discover in the Robin and some other birds, they most probably acquired in a considerable degree from ourselves, and may fairly be considered an American propensity, which we have fastened upon them. The Robin is a true thrush, and consequently, its principal food is fruit and small berries and these the wild cherry trees and Vacciniums furnished, until man bought all the fruit of the first mentioned he could procure, to put into his rum, and the latter into his puddings! He having taken unto himself all the indigenous fruits and berries, that are to be found in the forests, swamps and fields, the poor Robins and some other birds, have been compelled by their honest fruit-loving appetites given them by the great Giver of all gifts, to resort to our gardens for a supply of their favorite food, or starve! Well might our birds say to man, if they had the gift of speech, as they have of song, let our indigenous berries, that nature has given us, alone, before you complain of our robbing your gardens of their cultivated fruits!

The form of the Robin is good and symmetrical, but its plumage is not brilliant. Nature gives form, and adapts the parts of birds to their peculiar mode of obtaining a living, and in doing this, frequently in our poor conceptions, destroys their symmetry. But we overlook what we falsely suppose a want of due proportions in the parts of birds, by entertaining the notion that *fine feathers* will alone make fine birds—as, for instance,

the Scarlet Ibis. As the Robin's food can be obtained without much difficulty, no elongation or contraction of its limbs becomes necessary, hence there is more proportion in its parts than is to be found in most birds. The note of our bird is characterized by its honest earnestness, and is always pleasing. Its habits are social, and it is found no where in abundance, except around the habitations of man, where it rears its young, confiding in his protection. We should miss the Robin more than any other bird, should it, from any cause, become rare or extinct, associated as it is from our childhood, with the return of spring, the ripening of the summer fruits, and our shooting days in early autumn. Our rural writers would also regret to lose so fruitful a theme, as the Robin has always furnished. It is a favorite bird with most persons, notwithstanding its propensity to partake unbidden of their choicest fruits. Some, in their great desire to shield their favorite from a charge of shot, have claimed for it the habits of an insectiverous bird, but ornithologists know it does not possess them. Its claims for our protection should come from its confiding, familiar character, its pleasant song, but more especially from the love we cherish for all birds. And if these considerations are not strong enough to prevent our shooting it, let us remember its relationship to its name-sake, Robin Redbreast, of Britain, who so affectionately covered up the dear little babes in the woods with leaves. Surely, the remembrance of this touching and affectionate deed, will save our bird from harm! In the circular groupings of Mr. Swainson's classification, the Robin is distinguished as a true Thrush by the generic name *Merula*, and by Dr. Richardson, in his "Northern Zoology," by the specific name *Merula Migratoria*, and says it is called by the Cree Indians the Peepeechew.

Danvers Port, April 1st, 1858.

For the New England Farmer.

TIGHT TANKS UNDER THE CATTLE.

MR. EDITOR:—Being a constant reader and admirer of the *N. E. Farmer*, for its usefulness in directing the husbandman in his daily avocations, and for its independent and fearless expression of opinion on great moral questions, I am glad to offer a few facts for its columns.

Just before haying last summer, we raised a barn, built a substantial cobble-stone wall under the back side and each end, and surmounted it with a good split stone underpinning, making the cellar eight feet deep. After haying we built a water-tight tank forty feet long, twenty feet wide and four feet deep, of the construction of which I will give you a brief description.

Rift granite in our town is quite plenty, of which I obtained a good quality for the purpose. We split them twenty inches wide and laid them two tiers high, after fitting the two edges that came together and squaring the ends. Top of the wall we set the posts to support the barn, and between the posts we fitted permanent eight inch timbers. Where the ground is dry and a sort of hard pan, the cement may be put on to the earth itself, but mine being wet and liable to innundation, we proceeded in the following manner: We made an underdrain to carry off the water up to the corner of the cellar, dug the bottom inside the tank, sloping and dishing; we then obtained rubble-stone, of which we have plenty, and set the bottom all over with them, in scientific order; then gathered pebble-stone and covered the rubble, which made a most permanent foundation for the cement, which we laid on about two inches thick. The tank makes a tight and durable hog-pen, and saves all the dropping, liquid and solid, being directly under the stable. It requires a large amount of absorbing materials to be thrown in, in order to save all; save all the liquid, which adds very much to the manure heap. The manure appears to be of excellent quality. How it will prove time and the crops will tell.

CALVIN SMITH.

West Henniker, N. H., May, 1858.

ENTOMOLOGY.

This is a word which means *a talk about insects*; it is derived from two or three Greek words, as many of our words are that are used as names to insects and flowers and plants. Writers upon insects find it necessary to classify them, bringing those of the nearest corresponding structure together, and giving them one general name. These divisions are called *Orders*, and there are seven very generally adopted by naturalists, which are as follows, viz.:

1. COLEOPTERA. The insects included under this term are *Beetles*, that is, a *biter*, an insect that *bites*. Their wings are covered and concealed by a pair of horny cases or shells; hence the order to which these insects belong is called Coleoptera, a word signifying *wings* in a *sheath*.

2. ORTHOPTERA. Including *Crickets*, *Cockroaches*, *Grasshoppers*, &c.; their wings, when not in use, are folded lengthwise in narrow plaits like a fan, and are laid straight along the top or sides of the back. They belong to the order *Orthoptera*, which means *straight wings*.

3. HEMIPTERA. *Bugs*, *Locusts*, *Plant-lice*, &c. These insects have a horny beak for suction, and four wings, which lie flat, and cross each other on the top of the back. They are called *Hemiptera*, because that word means, *half*, and *wing*, literally *half-wings*, on account of the peculiar construction of their wing-covers, the hinder half of which is thin and filmy like the wings, while the fore part is thick and opake.

4. NEUROPTERA. *Dragon-flies*, *Lace-winged-flies*, *May-flies*, *White-ants*, &c. Insects with jaws, four netted wings, of which the hinder ones are the largest, and no sting or piercer. This order of insects has four membranous, transparent, and generally naked wings, having a net-work of nerves, as may be seen on the dragon-fly, or "devil's darning needle," as they are frequently called. These dragon-flies prey upon gnats and mosquitos, and if the reader will carefully ob-

serve them take their victims some still afternoon in June, he will be exceedingly interested. He must sit down quietly near some corn or other plants, having them between him and the sun, otherwise he would not be able to see the extremely small gnats that are flying or springing from plant to plant, in search of their food, or sporting in the mild rays of the sun just before it sets. At a little distance from the plants the "devil's needle," with wings outstretched and vibrating so rapidly as scarcely to show any motion, seems poised in the air, a pretty, harmless thing. Now he has changed his place—you did not see him move! but in that lightning dash his prey was secured! A more careful observation will enable you to see his motions, as well as the minute insects upon which he feeds. This dragon-fly is repulsive to many persons, but a better acquaintance with him will bring him into favor.

5. LEPIDOPTERA. *Butterflies* and *Moths*. These insects have a mouth with a spiral sucking tube, and four wings covered with scales. They belong to an order called *Lepidoptera*, which means *scaly-wings;* for the mealy powder with which their wings are covered, when seen under a powerful microscope, is found to consist of little scales, lapping over each other like the scales of fishes, and implanted into the skin of the wings by short stems.

6. HYMENOPTERA. *Saw-flies*, *Ants*, *Wasps*, *Bees*, &c. Insects with jaws, four-veined wings, in most species, the hinder pair being the smallest, and a piercer or sting at the extremity of the abdomen. They fly swiftly, and are able to keep on the wing much longer than any other insects, because their bodies are light and compact, and their wings very thin, narrow, and withal very strong. The males have no weapons of offence or defence except their jaws. The females are armed with a venomous sting, concealed in the hind part of the body. The word *Hymenoptera*, is from two Greek words, meaning a *membrane*, and a *wing*.

7. DIPTERA. *Mosquitos*, *Gnats*, *Flies*, &c. Insects with a horny or fleshy proboscis, two wings only, and two knobbed threads, called balancers or poisers, behind the wings. The word *Diptera* signifies *two wings*. Various kinds of gnats and of flies are therefore the insects belonging to this order. The proboscis or sucker, wherewith they take their food, is placed under the head, and sometimes can be drawn up and concealed, partly or wholly, within the cavity of the mouth.

If the farmer were to give a little more attention to these busy out-door people who occupy his farm with him, who are his constant companions, who sometimes aid and sometimes injure his plans, while they are enjoying their brief life and seeking to perpetuate their kind, he would find an interest in them which would almost repay him for partial losses of crops. That attention might also lead him to such a knowledge of their habits as to enable him to prevent any injury from them.

There are several excellent works upon the subject of insects, the best of which, for the common reader, may be "Harris' Insects Injurious to Vegetation." "Fitch's Noxious Insects of New York," is also a popular and reliable work. There is also Koller on Insects, and various works describing the insects of particular States or other localities.

For the New England Farmer.

REASON AND ANIMALS.

Walking along the streets of Boston a few days since, my attention was called to the motions of a blind man led by a large black dog, to which a string was attached, one end of which was held by the hand of the man. While passing along the walks between the cross streets, there was no more than ordinary interest exhibited by the dog for the man. He occasionally looking around to see if his master was feeling his way with his cane successfully, and was not jostled by the passers by, trotted on or walked as he saw his way clear, or as the will of his master determined. There chanced to be a wide street crossing their path to which they were approaching, and my curiosity was excited to know the result of their attempt to cross. As they came near to the side of the walk, the dog stopped, and the man, governed somewhat by the sound in the street, and by the dog, slackened his pace, and immediately commenced feeling with his cane for the curbstone; having found it, he stood near it and prepared himself to step down at a moment's warning from the dog. In the meanwhile the street being full of vehicles, the dog looked up the street to the left, and down to the right, looked as did the gentlemen and ladies who gathered about him, for an opportunity to cross, without being run against, or hurrying ungracefully over. Soon the street became clearer, and nearly free of wagons, only one remained in the street. Most of the pedestrians were passing over; but the dog did not start, the reason we found to be, a wagon which was coming in the distance rattling along which he had caught sight of, and had calculated truly that he could not cross before that came along, and accordingly he waited for it to pass. But he had evidently determined to cross when that had passed, as he exhibited a careless restlessness, as if no alertness was needed at present, but a patience in waiting that the wagon might pass and allow him to put into execution the result of his reasonings, that of taking advantage of the opportunity which would certainly be presented. When the vehicle was abreast he started, and the man with one step was in the street, and with the use of his cane and the constant pulling of the dog on the string he hurried safely over.

This may be seen most any week in this city,

and to our minds is no extraordinary display of reason on the part of a dog. But it brought to my mind forcibly the somewhat prevalent belief that the chief difference between man and the animals is, that while the former has reason, the latter has not. I think that facts in regard to animals, and their habits, have come within the observation of most persons, that ought to convince them that in respect to reason, men, and some animals, at least, are alike. As there is evidently a radical difference between them, I think it may be wholly accounted for, by the theory that animals have no conception of virtue or vice; that they have not the power to know moral right or wrong. To them the moral world has no existence. The fear of man will account for many exhibitions by the domestic animals, which are analogous to contrition or repentance in man.

This instance of the man and his dog does not so much suggest these thoughts, as the fact that I recently heard the statement, "that animals do not possess reason," stated by a public speaker to an audience, in such a manner, that, in his opinion, at least, it admitted of no doubt. L.

EVENING HOURS FOR MECHANICS.

One of the best editors the Westminister *Review* could ever boast, and one of the most brilliant writers of the passing hour, was a cooper in Aberdeen. One of the editors of the London Daily *Journal* was a baker in Elgin; perhaps the best reporter of the London *Times* was a weaver in Edinburgh; the editor of the *Witness* was a stone mason. One of the ablest ministers in London was a blacksmith in Dundee; and another was a watchmaker in Bauff. The late Dr. Milne, of China, was a herd-boy in Rhyne. The principal of the London Missionary Society's College at Hong Kong was a saddler in Huntley; and one of the best missionaries that ever went to India, was a tailor in Keith. The leading machinist on the London and Birmingham Railway, with £700 pounds a year, was a mechanic in Glasgow; and perhaps the very richest iron founder in England was a working-man in Morap. Sir James Clark, her Majesty's physician, was a druggist in Bauff. Joseph Hume was a sailor first, and then a laborer at the mortar and pestle in Montrose; Mr. McGregor, the member from Glasgow, was a poor boy in Rosshire. Jas. Wilson, the member from Westbury, was a plowman in Haddington, and Arthur Anderson, the member from Orkney, earned his bread by the sweat of his brow in the Ultima Thule.—*Maine Farmer.*

FACTS ABOUT PHOSPHORUS.

It is now just two hundred years since phosphorus was first obtained by Brand, of Hamburg. So wonderful was the discovery then considered, that Kraft, an eminent philosopher of the day, gave Brand $300 for the secret of its preparation. Kraft then travelled, and visited nearly all the courts of Europe, exhibiting. Phosphorus resembles bees-wax; but it is more transparent, approaching to the color of amber. Its name, which is derived from the Greek, signifies "light-bearer," and is indicative of its most distinguishing quality, being self-luminous. Phosphorus, when exposed to the air, shines like a star, giving out a beautiful, lambent, greenish light. Phosphorus dissolves in warm sweet oil. If this phosphorized oil be rubbed over the face in the dark, the features assume a ghastly appearance, and the experimentalist looks like a veritable living Will-o'-the-Wisp. The origin of phosphorus is the most singular fact concerning it. Every other substance with which we are acquainted, can be traced to either earth or air; but phosphorus seems to be of animal origin. Of all animals, man yields the most; and of the various parts of the body, the brain yields, by analysis, more phosphorus than any other. This fact is of no little moment. Every thought has, perhaps, a phosphoric source. It is certain that the most intellectual beings contain the most phosphorus. It generally happens that when a singular discovery is made, many years elapse before any application of it is made to the welfare and happiness of man. This remark applies to phosphorus. —*Johnston's Chemistry.*

THE FLESH OF EXTRA FAT CATTLE.

There is a very general desire among raisers of stock-beeves, hogs, pigs, sheep, &c., for the shambles, to produce animals that will greatly surpass the average of their fellows in the accumulation of flesh or fat. They take peculiar pleasure in stuffing an animal with rich food until it becomes such a mass of fat as almost to lose the use of its limbs, when it is duly weighed and its enormous ponderosity is heralded as an especial recommendation of the creature for table use. Nothing is more frequent than to meet with commendatory notices of such monstrosities in the newspapers. Oxen weighing a ton, hogs of six or eight hundred pounds, and calves as heavy as the parent cows, seem to be among the legitimate marvels which the press is bound to notice. This tendency to secure excessive weight and corpulence in animals, is also observable in the fat cattle offered for prizes at agricultural exhibitions, though not to so great an extent, perhaps, as above indicated.

The opinion seem to follow, too, that these gross accretions of animal matter are of superior quality for consumption. But if the same rule was applied to them that is applied by experienced judges to other articles of food, they would rate below instead of above par in the provision market. Every judicious housewife knows that excessively fat poultry is but poor eating; that mammoth squashes and pumpkins are not of so good a quality as those of moderate size; that extra large vegetables of all kinds are really inferior; and that even in the matter of fish, in regard to which there is usually very little discrimination practiced, those medium in size and flesh are the best for the table. There is a certain medium in all articles used for food, the nearer to which the production of them is kept, the more wholesome and nutritious they are.

This is not only the lesson of experience, but it is borne out by the researches of science. Mr. Frederick J. Gant, late surgeon to the military hospital in the Crimea, has recently made a very interesting investigation respecting the wholesomeness of the flesh of fat prize cattle as an article of food, which fully establishes the unfitness

of such flesh for human sustenance. Mr. Gant attended the Smithfield cattle show, and afterwards examined the carcases of the slaughtered prize bullocks, heifers, pigs and sheep which remained in London, and gives the result of his observations at great length. His conclusions are deserving of great attention not only by the breeders and feeders of cattle for the shambles, but by all consumers of meat. Mr. Gant says:

"Let an animal be fed beyond the limits compatible with health, and the superfluous fat is no longer confined to the instertices of muscular fibres, but actually invades and eventually supersedes them. The fibres then contain fat, instead of the fibrillæ, (known to anatomists,) in which reside the contractile power of muscle and its nutritive value for human food. We therefore say that such meat no longer retains its healthy structure and nutritive quality, but has actually degenerated into fat, although still presenting the semblance of ordinary muscle, and thereby deceiving both buyer and seller.

"We should therefore expect in vain to replenish our own muscles by the use of such food, nor should animals thus overfed be regarded as prize specimens of rearing and feeding. The heart, being converted into fat, no longer retains its contractile power, but beats feebly and irregularly. The blood, therefore, now moves onward in a slow and feeble current. Hence the panting breathlessness due to stagnation of blood in the lungs, while the skin and extremities are cold. Hence the stupid, heavy-headed expression of a congested brain, and the blood-stained appearance of meat after death. The slightest exertion to an animal under such circumstances might suddenly prove fatal. Were a man in this condition to present himself at an insurance office, it would refuse to insure his life at any premium. Yet, under similar circumstances, a sheep is awarded gold and silver medals, and its feeder a prize of £20.

"I would observe well, during life, the excretions, and see if their condition gave proof of over-feeding. If so, I should consider that the stomach and kidneys were overworked. Nor would I neglect the less perceptible evidence afforded by the skin, the respiration, with the state of the brain as indicated by the general expression of the animal, and the mode of carrying its head. Then, after death, I would pursue my inquiry further, and see whether my opinion of the animal, formed during life, was corroborated or reversed by the appearances of its internal organs, the condition of the heart, lungs, stomach, intestines, liver and kidneys more especially.

"All this kind of knowledge is required by physicians and surgeons in their estimate of health and disease, and is equally necessary to settle the question at issue. Instead, therefore, of pursuing the present system of rearing cattle, much as it may test the qualities of food and other matters of minor importance, let the breeders, feeders, exhibitors and prize judges alike visit the slaughter-houses; let them do this with a due knowledge of diseased appearances, and let them thus discover that system of rearing which is most compatible with the health of cattle, and which produces the largest amount of the most nutritious food for man.

"Under the present system, the public have no guaranty, and are not insured the best, if, indeed, the cheapest. The bulky withers of a fat bullock are no criterion of health, for his fat, tabular back may conceal the revolting ravages of disease. All this can alone be disclosed by an inspection of the animal's interior after death. The flesh of animals which has been produced by organs themselves diseased, is itself naturally deteriorated, and ought not to be regarded as prime samples of human food. These facts will be best understood by pathologists, but they also come home to the understandings, and certainly to the stomachs of the people."

We would suggest that the subject of fattening cattle would be an excellent topic for investigation and discussion by our farmers' clubs and agricultural associations.

HOME IS WHERE THERE'S ONE TO LOVE US.

Home's not merely four square walls,
Though with pictures hung and gilded;
Home is where affection calls,
Filled with shrines the heart hath builded.
Home!—go watch the faithful dove
Sailing 'neath the heaven above us—
Home is where there's one to love!
Home is where there's one to love us!

Home's not merely roof and room,
It needeth something to endear it;
Home is where the heart can bloom,
Where there's some kind lip to cheer it!
What is home with none to meet?
None to welcome, none to greet us?
Home is sweet, and only sweet,
Where there's one we love, to meet us!

THE STRIPED BUG, A REMEDY.—Remove all lumps and rubbish from the hill, then level and pat it down gently, filling all the remaining cracks and holes within one foot of the plants with fine dry sand, and be assured, that nine-tenths of the striped bugs visiting the premises will quickly leave for other quarters; my attention was first drawn to the subject by observing how much thicker the bugs congregated upon plants in cracked, lumpy hills than those more smooth. The striped bug is one of the first to make its appearance, and the plants being young and tender, they do the greatest amount of mischief. This putting ashes, lime and other stuff on the delicate leaves, I contend is like taking drug-poisons into the human system.—*Boston Cultivator.*

BUCKWHEAT STRAW FOR SHEEP.—One word on the benefit of agricultural papers. A few weeks since I was looking over some of the back volumes of the *Cultivator*, which I have bound, to find something I then wanted to see, when I accidentally came across a statement that sheep loved buckwheat straw. Having several loads of that straw in my barn, which was cut early and got in good order, and which I was intending to let my cattle pick from, and use the remainder for litter, I immediately went to my barn and tried my sheep, and found they ate the straw greedily. I think I shall realise enough from this discovery to pay for the paper a number of years.—*Country Gentleman.*

For the New England Farmer.

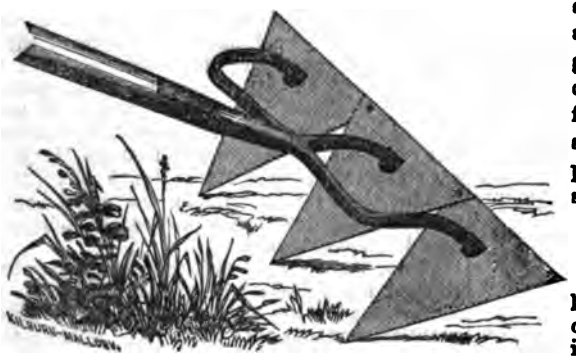
POTATOES.

MR. EDITOR:—It being about planting time "down east," I beg to make a few suggestions that will cost neither time or money to adopt.

1. Plant all small potatoes by themselves.
2. Plant large potatoes by themselves.
3. Cut the "seed end" from all varieties of large *long potatoes*, and plant separately.
4. Cut the remaining part of the large potato into quarters, and plant separately in drills twenty-two inches apart. Three to four stocks to a hill is sufficient. This latter mode in throwing away the "seed end," is Long Island fashion. The farmers say it gives them all large potatoes, without small ones, and as many pounds to the acre. Quite an object in digging time.

Mr. Editor, it was about a settled fact in my mind last year, in reading your excellent *Farmer*, that large potatoes for *seed* had the best of the argument. It is to be hoped that the matter will be fairly tested by many of your farmer readers, which may take two or three years to prove. The animal creation is made *dwarf*, or *gigantic*, by close breeding. Will not the same law apply to the vegetable kingdom, in selecting your largest, best seed to produce from? Try it.

New York, May 1st. H. POOR.



A NEW HOE.

The neat little engraving above illustrates a new Hoe which has been recently invented and introduced to the hoeing world, by Mr. H. A. LOTHROP, of the firm of H. A. Lothrop & Co., Sharon, Mass. We have used it enough to find it a pleasant implement in many places; but not enough to speak of the comparative merits between this and the common hoe.

It is claimed by the inventor to work with much greater ease, and to be equally as efficient as the old hoe, in every place excepting where it is desired to remove a considerable body of earth from one point to another.

All we can say further of it now is, that it will not cost much to try it, and it may be found to possess some advantages over the old implement which has become so familiar to our hands. It is made with two and three prongs or points.

EXTRACTS AND REPLIES.

MAGGOT IN CABBAGE PLANTS—BUGS ON VINES.

Is there anything that will prevent or destroy the maggot in cabbages? Last spring I transplanted several hundred cabbages from my hot bed, and in a short time they would turn yellow and die. I found at the roots a lot of little maggots.

I have heard much complaint about bugs among vines, especially the striped bug. Prevention is better than cure. I will tell you how I stop their ravages. In the fall of 1855 I raked up all the rubbish of my garden, including squash and cucumber vines, and burnt them; the next spring I found no bugs on my vines, while my neighbors' were destroyed. I have practiced it since, and have not been troubled except now and then by a stray one from my neighbors' gardens. S. D.

South Hanson, May, 1858.

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ARBOR VITÆ FROM SEED.

I wish to inquire if the *Arbor Vitæ* can be propagated from seed; when it should be planted; and where it can be obtained?

Holliston, 1858. C. J. HEATH.

REMARKS.—The arbor vitæ flowers in May and ripens its cones in the following autumn. The seed should then be gathered, sowed in a very fine soil, moderately rich, covered quite lightly with fine loam, and then a few leaves or straw scattered over them. We suppose the seed may be obtained at the seed stores in Boston.

—

PUMPS AND PIPES.

I wish to inquire which is the best kind of pumps and pipe for wells? Are copper pumps objectionable, and what is the best substitute for lead pipes? What do you think of zinc pipe, or block tin, or gutta percha? There is also a kind of stone pipe made which is glazed with salt. I would also like to get Dr. Alcott's opinion upon these points. A NEW SUBSCRIBER.

Fitchburg, May, 1858.

REMARKS.—In the situation of your well, a good wooden pump and pipe, or bored log, is better than any thing else.

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TIMBER—POTATOES—MANURE—ROSE BUDS.

Is it as good time as any to cut timber as soon as the leaves get their growth? *(a.)*

Will potatoes keep as well on a cement, as a sand cellar bottom? *(b.)*

I have read that the potato rot is almost, or entirely unknown in countries where there is no mildew. If such is the case, is there not something in the shape of powder, or solution, that can be applied to the tops to prevent the rot? *(c.)*

What potato sells the best in the Boston market? *(d.)*

Which is the best for green manure, clover or lucerne, and how should it be plowed in? *(e.)*

Will rose-bud seeds come up, if planted, and when should they be planted? *(f.)*

Branford, Conn., 1858. O. C. HOADLEY.

REMARKS.—*(a.)* September is considered the best time to cut timber.

(b.) Cannot see why they would not.

(c.) If the rot is *not* occasioned by an insect, perhaps the application of some kind of salt, either alkaline, or something else, might prevent the rot.

(d.) No one in particular. The State of Maine, the Irish Cup, the Chenango, Peach Blow, Jackson White, Jenny Lind, and many other kinds, are constantly sold, some kinds preferred by one, and some by others.

(e.) Cannot tell—never tried lucerne. Cut the clover and let it partially dry before it is plowed under. It will not then pass into rapid fermentation and drive off the sugar and starch which it contains.

(f.) Plant the buds in the fall, and cover slightly with leaves and fine loam.

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DOES SUPERPHOSPHATE PAY?

Last year I planted my corn with about a spoonful of Hoyt's bone superphosphate of lime in the hill, which cost about the same as the labor of manuring in the hill; the manure having been previously spread and plowed in. The corn came up quick, grew fast, ripened early, and produced a rich harvest of good, sound corn. I calculate that I got double pay for the phosphate. First, it saved the labor of manuring in the hill, and secondly, it increased the crop of corn.

Yours, &c., SAMUEL W. FOSKETT.

Charlton, Mass., 1858.

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WHAT WILL DESTROY ANT-HILLS?

Will you inform me how I may kill an ant hill that has been among my flowers two years? I have tried scalding and ashes, but with no success. M. GREENLEAF.

Wiscasset, Me., May, 1858.

REMARKS.—Open a hole in the hill, put in some light wood and set it on fire—keep it burning for two or three hours.

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WHICH IS THE BEST HORSE-RAKE?

I intend to purchase a horse-rake, and wish to inquire which is the best? The only kinds much used in this vicinity are the revolver and spring tooth; of the two, I much prefer the revolver, but if there is any kind superior to it, I wish to obtain it. My land is not very stony, neither is it entirely clear of them. W.

Fitchburg, May, 1858.

REMARKS.—We have used nearly all the horse rakes that are common, and give a decided preference to Delano's Independent action. It is simple, strong, and does the work effectually, without gathering up any more rubbish than a hand rake will. For sale at Nourse, Mason & Co.'s, Quincy Hall, Boston. Price about $12.

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ASHES ON POTATOES AND CORN.

Permit me to ask the opinion of some of your correspondents as to which is the best manner of using ashes on potatoes and corn.

Atkinson, N. H. NORMAN MATHEWS.

—

A BIG CALF.

MR. SOLOMON RICHARDSON, of Westford, Mass., has a calf one year old that weighs 650 pounds—native breed. G. B.

Westford, May, 1858.

For the New England Farmer.

HORSES.

MR. EDITOR:—I have lately read several articles in the newspapers treating of thorough-breds, with occasional sneers at some races of horses that are in high repute among us. As far as I am able to observe, the principal excellence claimed for thorough-breds consists in their racing qualities. I confess myself so "puritanic," that I am unable to see any benefit to the community arising from horse-racing. It does not produce a dollar, or aught that can feed or clothe or promote the real welfare of the community. I have owned several horses, driven them at the plow and on the road, and though none of them were called thorough-breds, some of them in style, strength and endurance, were good enough to satisfy the most fastidious. We are told that to keep up the blood of our horses, we must resort to thorough-bred stock. That the Morgans have deteriorated in size, &c. Now I believe that it is for the interest of the farmer to breed such horses as will work at the plow, or, in short, are "good business horses."

The attempt to raise and train fast horses has emptied two pockets where it has filled one. I do not deny to imported horses many valuable qualities, and some of them have become the progenitors of excellent animals. But I protest against this attempt to spread the foolish idea that it is for the interest of our farmers to breed from none but thorough-breds, so called. Our Morgans and Black Hawks are not the mere "runts" that some of the city papers speak of. Come up here into the country, and I will show you a plenty of Morgans and Black Hawks, whose weight, from ten to fourteen hundred pounds, is sufficient for most purposes. A writer in the *Tribune* stated that it was "acknowledged" that the Morgans had deteriorated in size. Acknowledged by whom? Not by Vermonters, in the State where they have been bred for about fifty years. I do not know what kind of a pony has been seen in the city, but so far from deteriorating in size, very few can be found that are not heavier than Old Justin, the sire of the race, whose weight never came up to one thousand pounds.

As for strength or endurance, I had rather have the smallest Morgan pony that can be found, than one of your light-limbed, long legged, long-necked, rat-tailed thorough-breds. Running a

mile in 2.40 is no part of the proper use of a horse. Give me a good sized, well formed animal that is able to draw a load, trot in the buggy eight or ten miles in an hour if need be, and when he is properly cared for, will repay that care with something besides laziness and unsoundness. I love to feed such an animal. He will *earn* his living, not gamble it out of fools' pockets.

If speed were the object, I think the profound critics on Morgan horses might learn a little modesty, and wait until they could match Ethan Allen, to say nothing of young Morrill, owned at Manchester, N. H., who by-the-bye is a very fast going handsome trotter, and can hardly be matched by any thorough-bred entire horse in the country. One of his colts owned at Laconia, N. H., by L. T. Tucker, Esq., trots down close to 2.40. Also the North horse, sired by old Black Hawk, a splendid animal, going in 2.40 or less. But enough of this.

I desire to see our farmers turning their attention to raising a class of good roadsters, such as we have seen in times past—horses that can work every day. Brother farmers, when you have a good mare that will command a good price, keep her for your own service; do not sell her to the first man who offers a fair price. Keep her to raise stock, and for service on the farm; you will find it a good investment. PLOW JOGGER.

Addison, Vt., May 6, 1858.

For the New England Farmer.

CROSSING PUMPKINS WITH SQUASHES.

WHERE DOES THE SQUASH BORER COME FROM?

MESSRS. EDITORS:—Your correspondent "A. M. P.," in the *Farmer* of April 17th, has thrown the light of his experience on the question proposed by "Essex," in January last; but as Essex appealed directly to Marblehead as an "overflowing fountain" on squash culture, perhaps she may yet be allowed to throw a little mist over the subject, in the summing up of her experience.

On a pretty extensive inquiry among our farmers, I meet with one vital trouble at the outset, and that is, that from the value of our land for high cultivation, owing to the facilities presented by a good soil, good markets and abundance of valuable manures, the culture of pumpkins for the past ten or fifteen years has almost been obsolete. The summing up of their experience previous to the general introduction of the marrow-squash, amounts to this: that the squash and pumpkin will cross; which they have seen in the squash assuming the shell of the pumpkin, somewhat of its color, and when thus characterized being inferior in quality; that they never have seen the squash take upon itself the form of the pumpkin.

The experience of one gentleman was striking. Several years since a neighbor whose land was adjoining, planted a few hills of the old-fashioned "nigger pumpkin" near by a large crop of marrows, a common wall intervening. For several years previous to this his marrows had been exceedingly pure, but since that date, with the utmost care in selecting his seed he has always had some among his marrows with a hard pumpkin-like shell!

There appears to be a general impression among farmers that the borer, that has proved himself of late years so troublesome to the squash-vines in many sections, ascends from the ground and bores his way into the plant. Your correspondent from Spring Grove, in the *Farmer* of April 17th, appears to have adopted that theory; I have also noticed it interwoven into some of the reports included in the transactions of our County Agricultural Societies.

If gentlemen will turn to the treatise of the late Dr. Harris, on "Insects injurious to Vegetation," they will find that that most original observer traced the parentage of the borer to a species of the coccinella, lady-bird or lady-bug, as it is variously known. This insect deposits its eggs in the vine at about the time of the pushing of the runners. It may be recognized by its resemblance to the common lady-bug in form, being larger, of the size of the half of a large pea, and its back having a red groundwork, spotted with black. I quote from memory, but believe I am substantially correct.

Marblehead, Mass. J. J. H. GREGORY.

CURE FOR THE GARGET.

Some two or three years since we published the following recipe for curing garget, and from actual experiment in this vicinity, we know it to be a good one. Mr. Lowell Greenleaf writes to one of our agricultural exchanges, (we have lost the credit,) giving an account of his trials of the receipe, and its results, as follows:

"Having had a cow that was almost worthless on account of bunches in the udder which rendered the milk bloody, stringy, and not fit for the hogs, I was on the eve of giving her up for lost, when I used the following recipe, which in three weeks restored her to perfection, and not the slightest symptom of garget has appeared since. I could cite numerous cases of perfect cure. And not only doubling the quantity, but improving the quality of the milk and butter. Since I applied this remedy, my cow has, in two years risen in value from $20 to $75:

Recipe.—"An ounce and a half of hydriodate of potash, at 440 grains to the ounce, will contain 660 grains. Put the whole into a glass bottle of sufficient capacity, with fifty-five table spoonfuls of cold water. Shake briskly, and it will be thoroughly dissolved in a few minutes; one table spoonful will contain a dose, the requisite quantity of twelve grains. Wet a little Indian meal or shorts and thoroughly stir in the dose. Give two or three doses a day. Keep the bottle corked tight."—*Ex.*

SOOT.—In England this is saved and applied to the wheat and other crops, with great returns. In this country, it is too often thrown into the street and lost. About eighteen bushels are a good dressing for an acre. Several salts of ammonia, magnesia and lime render it too valuable to be wasted. As a liquid manure for the garden, nothing is better than three or four quarts of soot dissolved in a barrel of water, and applied with a watering pot. Almost every family may, as well as not, preserve a few bushels of it. It is good for any kind of grain; also for roots, especially potatoes and carrots; and nothing except Peruvian guano, which it is silly to buy, and at the

same time throw away about as good an article, is equal to it for giving a rich bloom to flowers. Save your soot and you may have the richest vegetables and the brightest flowers.—*Plow, Loom and Anvil.*

THE MILK TRADE OF BOSTON.

The reading of a small book several years since, entitled "*The Milk Trade of New York,*" together with certain facts which came to our knowledge, and several observations made from time to time in regard to matters quite nearer home, led us to make some investigations into *The Milk Trade of Boston.* These investigations have been going on with more or less care and earnestness for the space of two years, and have led to results which, when stated, will not fail to startle some of the upright and confiding consumers of milk in this city.

In the first place, the milk trade of Boston has reached a magnitude, in a commercial point of view, which gives it importance, as employing a large number of men and teams after it leaves the farm, and has been transported over the railroads into the city, or is brought here in wagons. This goes to make up a part of the active business of the city, and in this point of view alone, is worthy of consideration.

We find by the investigations instituted, that the value of the milk annually brought to the city, as it comes from the country, is about *one million of dollars*, and that, *as it is sold out to the consumers*, it has swollen to the sum of *one million two hundred and fifty thousand dollars!* the *two hundred and fifty thousand dollars* being the charge for carrying the *Cochituate water* through the streets, and peddling it out at six cents per quart! This may seem a strong statement, but we have the facts to justify us in making still broader ones, or even to make specific charges, which it may yet become necessary to do.

That the milk leaves the country pure, as a general thing, there is no reason to doubt. This point has received attention, and the facts elicited all go to show that a few instances, only, have been found where there was an adulteration of milk on the farm. Those who purchase and collect milk in the country, are vigilant and shrewd men, not only constantly examining the milk as it is sent to them, but visiting the places where it is made, to learn whether the cows who yield it are in good condition, and whether it is put up in a cleanly and wholesome manner. There are also other eyes than their own engaged for them, so that there is very little probability they can long be deceived by any producer who might be sufficiently corrupt to attempt it.

Happily for the consumer, and perhaps, happily for the *seller*, too, there is an instrument now in use by which any considerable adulteration of milk with water, or reduction of its cream, can be ascertained with certainty, and at a cost so trifling as to enable every family to own one, and to put it into practical use. This statement is made considerately, after many personal tests ourself, and with the certificates of other persons before us who reside in various parts of the State, all going to substantiate it. One of the tests instituted was as follows:

During the month of January last, we purchased, in person, from those usually selling it, a single pint of milk at a place, *from every part of the city of Boston.* Each parcel was placed in a bottle by itself, and the name of the person of whom it was purchased, together with the name of the street and number of the place of business, entered upon a card and tied to the bottle. When a large box full of these samples had been collected, the milk was taken into the presence of several impartial business men of the city and tested. Before giving a dozen of the cases as examples, we will state that in the *pure* milk *(of all cows,)* the instrument will stand at the degree marked 20, and that as it rises above that point it indicates the amount of water introduced; so that if it stands at fifteen, the instrument being graduated downwards, it is one-fourth water, if at 10, one-half water, and so on.

The following table will show, by this instrument, the amount of water mixed with each sample, viz.:—

Case.	*Degree.*	*Adulteration.*
1. —— Street	19½	nearly pure.
2. —— Street	17	15 per cent. water.
3. —— Street	13	35 " "
4. —— Street	17	15 " "
5. —— Street	15	25 " "
6. —— Street	17	15 " "
7. —— Street	10½	47½ " "
8. —— Street	21½	skim milk.
9. —— Street	14	30 per cent. water.
10. —— Street	13½	32½ " "
11. —— Street	13½	32½ " "
12. —— Street	15½	22½ " "

These results show that nearly—but not quite *—one-quarter part* of all that is sold for milk in Boston, *is water.* The samples collected were from all classes of places, including the good and bad, and were probably a fair average of them all.

The question now arises, who is justly chargeable with this corruption and fraud upon our people? Our investigations have not left us without some pretty tangible evidence on this point.

Some of the places where this adulteration takes place, together with the method of coloring, and other parts of the *modus operandi*, are much better known than the participators in this wicked work are aware of. That the milk comes pure from the country, as a general thing, we have no doubt; it then passes through the hands of the milk distributors or peddlers, where it pro-

bably receives its first dilution, and then into the hands of the grocers, where it is brought into the limpid form of cases Nos. 3, 7, 10 and 11, in which it would be difficult by the taste to tell whether milk or water prevails.

But this is not all. In many cases the milk is deprived of its cream either before or after it is watered, or perhaps in both cases,—so that the consumer after paying the highest prices for his milk and water, pays from 17 to 25 or 30 cts. per quart, for *his own cream!*

But the worst aspect of the case, after the *criminality* of such transactions, is the effect that such milk has upon the health of the people. Milk is now resorted to, not only by the feeble and infirm, but by the robust and healthy, as a cheap and wholesome article of food; and at a proper age and in a pure state, it unquestionably is so. So it forms a large portion of the food of numerous children who are, from constitutional or other infirmity, unable to partake of solid food. But does milk that has been mingled with water from twelve to twenty-four hours, and then trotted through the city and doled out in pints and quarts, retain the precise qualities of *pure* milk—or has it received some chemical change, which makes it neither milk nor water, and an article entirely unfit for use, and especially for the sick? We make no claim to an exact knowledge either of chemistry or physiology, but believe that such change actually does take place, and that those persons engaged in this abominable adulteration and traffic ought to be classed with those who poison wells, although their crime may be somewhat less in degree. Some of these persons, together with their practices, are well known, and they may be thought entitled to more special attention hereafter.

Other persons have been engaged with us in these investigations, who may possess facts which we have not given; we hope they will make them known, and that every consumer in the city will lend an influence to suppress this illegal and infamous traffic in an article which is second only to the "staff of life" itself.

A NEW THEORY ABOUT HOG CHOLERA.—On dissecting a hog which had died of cholera, Dr. Dougherty comes to this conclusion: That the disease is not in the brain, spinal marrow, lungs, liver, heart, or stomach. The large bowel and part of the small were without disease, but that portion of the small bowel next the stomach was literally filled with worms for several feet, and was highly inflamed. The worms were from two to five inches in length, hardy, active, and tenacious of life. They were crowded so closely in the bowels that their forms could be distinctly traced through their coats. The doctor thinks these the cause of the evil, and thinks that the treatment must be altogether preventive.

For the New England Farmer.

LETTER FROM AN ENGLISH FARMER.

MY DEAR BROWN:—When you go to Old England, and find yourself alone in a strange land, should you chance to meet a man who has faith enough in human nature to invite you to join him in his travels, to take you to his home, and show you such attentions as are usually bestowed only upon near friends, you will feel that sort of gratitude towards him, that I feel towards the writer of the enclosed letter. Among the pleasant pictures of English life, upon which I shall always look with pleasure, one of the most pleasing is that of my friend Lowe's nome at Brauncewell Manor, where, with his large and agreeable family, he farms his thousand acres, as independent as any lord of the land. He will pardon, I trust, the liberty I take in publishing a part of his private correspondence, but it is so illustrative of the difference between our own land and the mother country, that I know it will interest our readers, and it seems a pity they should not enjoy the privilege of reading it. The expression "wheats will cover a hare," which to many readers would convey no idea, is full of significance to one who knows something of the preservation of game in England, and who has seen the little rascals sitting up in the pastures, by scores, or skulking among the half-ripened grain, destroying what they please. The wheat is sowed in autumn, and by April 7th had grown well to afford cover for game. I hope my friend will favor me with more reports from Lincolnshire, for comparison with our own affairs. I am sure, at least, that I shall not soon forget the old yew trees and the purple beeches around the manor house, nor the kind hearts of those who sat in the sultry summer evening, with me in their shadows. Truly yours,

HENRY F. FRENCH.

BRAUNCEWELL, APRIL 7, 1858.
SLEAFORD, LINCOLNSHIRE, ENGLAND.

HON. H. F. FRENCH:—*My Dear Sir,*—Do not suppose we have forgotten you, though we do not write; few days pass that some of the family or friends do not refer to Mr. French, to his observations or writings. P.'s question yesterday, "Papa, do you think Mr. French will come this summer?" brought before me our Welsh tour, Lincoln Tower and Haddon Hall. Those were pleasant sunny days for her and me. We thoroughly enjoyed your visit. I would it were possible to have a fortnight with you and W. in Devonshire in the Peak Country and at Rokeby —Sir Walter's Rokeby—between turnip-sowing and harvest, generally the best time of the year, and usually the only time we farmers have at our disposal. Yours is indeed a long, long winter; it is well you have no poor. In the short summer how do you contrive to get your work done? Where do you get labor from? I understood you to say that, for the most part, the farmer's fami-

ly perform the work upon the farm except upon large holdings. Your New England farmer does well to talk about *neatness* and *ornaments* around dwelling-houses, planting orchards and flower-gardens; and you, yourself, set him at work to drain his land. Poor farmer! he can have but little time for Sundays. We have not lost four weeks in three winters—the three last I mean—else the horses and men have been at work. The draining has all been done in winter; we have an unlimited staff, and we *never* get all our work done that is set out. *How then do you manage to perform the requisite work within the proper time?* Your people must be killing themselves, I should think, and your animals have some sore shoulders, I should guess, sometimes.

We have had a most singular autumn and winter—no wind for three months after harvest, and the leaves staid upon all the trees until the end of November. I should think our woods were nearly as beautiful as your own forest scenery that you so well describe. The apples would have staid upon the trees until Christmas, and many of the pears did so. M. gathered a dessert-plate full of raspberries at the Moor on the 8th of December. We have had no rain until to-day, and but one inch of snow, and that drifted; we have only lost five days with the horses all winter. I have set 33 acres beans, which are up; 153 acres barley, most of it is up; 20 acres oats. I have 10 acres of Swede turnips to eat off with the fat sheep, and then sow with barley, and then the seed-time will be finished for this spring, excepting clovers, rye-grass, &c., which, as we now put them in with the broad drill, we leave until more at liberty than was usual formerly.

All the land that is for turnips this season has been plowed—cross-plowed — twice three-horse dragged—twice harrowed, and is now, when dry enough, ready for the roll. Some has been raked and is ready for the third plowing. Wheats about here will cover a hare, are very dark in color, and having been growing all winter, is rather too thick, but not dangerously so. There has not been such a winter since after the long summer of 1826. The mangolds are doing good service now; we are giving them to the ewes and lambs. They are the best article for milk that ever was used for that purpose; if you attempt them on your own place, *do not forget the salt.*

I should very much have liked to hear your lectures upon us all, last winter. I rather think we should not have found them all compliments.

We have received several copies of the *Farmer*, a report from the Patent Office, and newspapers. We have read all with pleasure, but with most interest look out your own contributions. That article of yours in the Patent Office report on draining, is well done, particularly well done. W. seems to hesitate about sending anything to the *Farmer*. He says the contributors to that paper farm the same as our Midland Counties. Where there is a difference, it is in favor of America. They appear to understand their business thoroughly.

We shall be glad to see all the *Farmers* that contain your letters; please advise how to remit the subscription.

Trusting that we shall continue to hear from you, believe me very sincerely, yours faithfully,

RALPH LOWE.

For the New England Farmer.

FARMING IN LEBANON, CONNECTICUT.

MR. EDITOR:—Lebanon is considered one of the best towns in New London county for raising general crops; such as grain of all kinds, and potatoes, which are generally very productive. Considerable attention has, of late, been paid to the raising of onions, of which almost every farmer has a small patch, and they are a very profitable crop. Almost all the new kinds of seed have been tried, to some extent. Of the new kinds of corn we have tried the King Philip, Wyandot and Rhode Island Premium. Of these three kinds I shall class the Rhode Island Premium as No. 1, as it yields more corn to the acre than either of the others, although the King Philip is a very good kind, and I doubt not, a very profitable kind to raise.

We have tried all the new kinds of manures; such as guano, and phosphate of lime, &c. Guano does very well on some kinds of soil, but, as a general thing, we do not think it pays very well.

We have some fine stock here. Many of the farmers have adopted a rule of raising from three to seven good likely calves every spring, and as soon as they get to giving milk, if they have any cows which are not good milkers, they are fatted, and their place made good by the heifers, and so on, from year to year until they get a good herd of cows.

Sheep are also raised to some extent, but most of the land is better calculated for raising other stock.

H. P.

Lebanon, Conn., 1858.

VALUE OF BUCKWHEAT.

A late issue of *Hunt's Merchant's Magazine*, in an article upon buckwheat, thus speaks of it concerning its properties as an edible:—"Considering the good qualities of buckwheat, it is probably less appreciated than any other bread grain. Writers on agricultural products seem to eschew it as food for man, and regard it only as a mischievous adulteration of wheat flour, or as a product of poor soil for cattle. It is of a totally different family of plants from the cereals, and will flourish on sandy hill-sides which are barren for other grain. It is probably the most easily cultivated, and the cheapest bread grain in the world. It is extensively cultivated in Belgium and some parts of France, where it forms the basis of food for the inhabitants. Though its properties are very different from wheat, it is, nevertheless, quite as rich in all important compounds, and in extremely cold weather, it is more substantial than wheat. It is, however, less digestible, and apt to disagree with weak stomachs, or persons unaccustomed to it. By analysis, buckwheat is second to wheat, in gluten, but deficient in starch. By the addition of one-fourth quantity of oat, or Indian meal to buckwheat flour, the bread is very much improved."

WARM WATER FOR CATTLE.—Mr. Peter Malbon, Jr., of this town, has devised a very curious and ingenious plan to warm water for his cattle, as well as to prevent the water from collecting in the tub. It consists of a small cast iron chest, or box, about twelve inches square, made water-

tight, fixed in such a manner that one side of it forms so much of the fireplace at is exposed to the heat of the fire. The water of the aqueduct, in its course from the fountain to the yard, is made to pass into this box at one end, and thus, becoming heated, passes out at the other end, and continues to the yard, which is across the road, and about six rods from the house. Mr. Malbon, previous to adopting this plan, had a good deal of trouble with the ice forming in his tub, but has very little trouble of that kind now. He says his cattle drink much more than they would if the water was cold, and he believes it to be more healthy for them. The calves enjoy it so much, that when let out to drink they will fight for the warm end of the tub.—*Somerset Telegraph.*

PICKLED FODDER.

MESSRS. EDITORS:—Not having seen in any agricultural journal of the U. S. the method of making hay, or rather preserving grass without sunshine, as practised in East Prussia, I communicate the same, in hope that some of the readers of your valuable paper may test the experiment, and publish the result in the *Homestead.*

The process is as follows: "Pits are dug in the earth twelve feet square, and as many deep; those are lined with wood, and puddled below with clay. They may be made of any other size, and lined with brick. Into this pit the green crop of grass or clover is put, soon as cut. Four or five hundred weight (cwt.) are introduced at a time, and sprinkled with salt, at the rate of one pound to each cwt., and if the weather and grass be dry, two or three quarts of water should be sprinkled on to each hundred weight, as it is laid down in successive layers.

It is only when rain or heavy dew has fallen that this watering is considered unnecessary. Much, however, must depend upon the succulency of the crop. Each layer of four or five cwts. is spread evenly over the bottom, is well trodden down by five or six men, and is especially rammed as close as possible at the sides, by wooden rammers. Each layer is thus salted, watered and trodden in succession till the pit is full. Much depends upon the perfect treading of the grass to the exclusion of the air. Between each layer of four or five cwts., a thin layer of straw may be sprinkled in order to show the quantity consumed when feeding out to stock. When the pit is full, the topmost layer is well salted. The whole is then covered with a well-fitting lid or follower of boards or planks, and then a foot and a half of earth shovelled thereon, similar to the covering of a coal-pit. This is to exclude the air. The grass thus covered speedily ferments, and in about a week sinks to about a half of its original bulk. During fermentation the covering should be examined daily to see if there are any crevices or openings, if so, they should be carefully filled. When the first fermentation has ceased, the pit may be opened and filled up again in the same manner as at first. A pit ten feet square filled in this way will contain nearly ten tons of this salted grass, which has the appearance of having been boiled, has a sharp acid taste, and is greedily eaten by the cattle. After once opened they may be left open without injury. One experimenter says that giving only twenty pounds per day of this feed with cut straw, kept his cows in excellent condition all winter.

FORREST SHEPHERD.

New Haven, Nov. 2, 1857.

REMARKS.—We give the above, not expecting that our friends will immediately adopt that mode of making their hay, but to show how differently from our own practice the mode of *hay-making* is in another part of the world.

ROOFS AND ROOFING.

MR. EDITOR:—I saw the remarks of R. C. Norton in the *Farmer*, No. 51, on the subject of Roofs and Roofing. Since reading said remarks, it has seemed to me that there might be a resinous substance prepared, and laid on with a caulker's mop, upon a tightly boarded roof, that would be impervious to water, and fire-proof on the outside. Tar and turpentine, or other like substance boiled down to a proper consistency, so that it could be laid on hot; and after the roof is well covered with it, sift on a coat of sand, and let it harden, then lay on another coat, and sand as before, and continue these alternate coatings of "half-made stuff," (as the caulkers call it,) and sand until the whole coating shall be ¾ to ½ an inch thick, the last coat of "stuff" to be more soft and pliable, to admit a good coating of fine sand to complete it. This coating to be used instead of shingles. The roof boards must be well seasoned, the side of the board next the heart of the log, laid up and snugly fitted together.

Will you please give your views upon the question? Whether or not such a mode for covering a roof could not be profitably used, instead of shingles, &c. I have a roof which I should like to cover with something that would be more lasting than sawed shingles. It was shingled with the best of sawed hemlock shingles in 1845 or 6, and now they are rotten and blowing off. May I not see your remarks on the mode proposed as a substitute for shingles? R. LEWIS.

Whitefield, Dec. 18, 1857.

NOTE.—We have not had sufficient experience with the use and nature of the cement or preparation proposed by our correspondent, to enable us to judge of its practical value for the purpose of roofing. We apprehend, however, that its utility will depend much whether the cold weather will contract it, and the warm weather expand it, to such a degree as to cause it to crack. A substitute for shingles, that shall be cheap in its first cost, and more durable, is a desideratum. We have examined, and are watching the uses of a new material for covering roofs, called "Russell's patent," introduced here by D. M. Walker, Esq., of Portland. It can be put upon new roofs just boarded, or on old roofs over the old shingles, at a cost of five cents per square foot. The proprietor recommends it as being very durable. Dr. Hill, of this city, has had it applied to the roof of a new house he is building. Mr. Johnson, landlord of the Central House has had it put on over the shingles of his buildings. It looks well, and promises well, but time will prove it.—*Maine Farmer.*

EATING ONE'S SELF.—As one of the Hudson River steamboats was about leaving the wharf on Saturday, two sturdy fellows were seen bustling through the crowd, with as much impatience as if they feared she would fly before they could get hold of her. Too eager to wait till he had fairly reached her, one of them, to the infinite amusement of the passengers and by-standers, vociferated an application in his broad, just-come-over dialect, as follows: "Captain! captain! or are you the mate? (and not waiting for an answer,) what will you ax to sail us to Albany—an' you to ate us? or what will you ax and we to ate ourselves?"

LADIES' DEPARTMENT.

FAIR PLAY FOR WOMEN.

At the Lowell Institute last evening, Geo. W. Curtis, Esq., of New York, delivered his lecture on "Fair Play for Women." There was a very fine audience present. He began by congratulating himself that on the theme he had chosen, there was no lyceum, no church, no party, not even a committee, to be compromised by any plain speaking. This, though a new subject, had already a literature of its own. It already counted a brilliant list of advocates; and many views which might seem novel, or, at least, unusual to his audience, were as familiar to those who had serious thought of the question as "the flowers of May;" and when we saw that something might be done, we would soon enough begin to consider how it should be done. Just in the degree that the world advanced, every question of right and responsibility in human relations was sure to come to the most certain discussion. It did no good to lose our tempers and call bad names. We might indeed suppress debate when the subject was but an infant, by laughing merrily; but when the poor little baby of a question that we laughed at had grown to be a vigorous problem, determined to be resolved, without the slightest respect for bugaboo, and quite able to endure being called vulgar and atheistic, and all the other cries of mad-dog, and when it become strong enough to hold our fists and pummel us with its own, we would very soon have to come to terms, or be reduced to an intellectual and moral jelly. So, in our day, the woman's question was coming to be quite robust. It might be an infant still, but it was a very noisy infant, and certainly was doing quite as well as could be expected. The question whether women have the same fair play for their faculties in the world that men have for theirs had become an absorbing and all important query indeed, and was not likely to be extinguished with a sneer, or put off with sops and sugar much longer. The question was not whether women were men, or whether there were differences of duties arising from difference of sex. In a general and poetic way, man might be called the head, and woman the heart; man the intellectual and directing force, woman the receptive and modifying genius. It is an instinctive requirement that every woman should be essentially womanly—though womanly could not be defined—as it was that every man should be truly manly. The sexes had their domestic relations in common, but each had duties and claims beyond the kitchen and nursery. But, notwithstanding this, the inferior position of woman in human society was apparent equally in the history of savage and of civilized nations.

Among primitive nations woman belonged to the man who seized her first; and the earlier books of the Old Testament showed how she was regarded by the Hebrews, who were polygamists, and among whom she was kept and sold like slaves. St. Paul was always a Jew in regard to woman, and many of the early Christian Fathers were positive pagans in their notions as to her duties and position. [Here the lecturer discussed the position of woman under the Egyptians, the Grecians, the Romans, among the Oriental nations and the Northern races, tracing her social progress through the chivalric and Elizabethan ages, down to more recent times.] In the history of literature, as showing the position of woman, he knew nothing more touching or beautiful than the words that well out of all the filth of the seventeenth century, written by a London hosier, who proposed, in his essay on "Projects," the plan of a college for woman, and declared, in a strain of simple, poetic, manly respect, unequalled since Shakspeare, but indicative of the general sentiment of his day: "I cannot think that God made them so delicate, so glorious creatures, to be only safeguards of his house, drudges and slaves. A woman well-bred and well-taught, furnished with all the additional accompaniments of knowledge and behavior, is a creature without comparison; her society is the emblem of sublimer enjoyments. She is all softness and sweetness, love, wit and delight."

In the eighteenth century women were the toasts of convivial hours, the toys of passionate moments, the puppets of a court, the slaves of parents and of brothers, the drudges of the household and of the field. In England, a Judge gravely held from under his horsehair wig, that a man might beat his wife with a stick as large as his thumb, and the women immediately petitioned him to know the size of the judicial thumb. But if it had not been larger than his wit or his sympathy, a cord of such sticks would not have made a baby tingle.

The whole theory of modern society was that of the Cochin China proverb, that women's hearts bear a good deal of breaking; and Goody Barlowe, towards the end of what was called and is called the sphere of woman, when she simpered, in her languid verses on flowers:

> "Gay without toil, and lovely without art,
> They spring to cheer the sense and glad the heart;
> Nor blush, my fair, to own you copy these,
> Your best, your sweetest empire is to please."

This was precisely the sentiment urged by every slave-merchant upon every Circassian girl that he brought to the market at Constantinople, and precisely the same lesson was inculcated by scheming mammas in Paris, London, New York and Boston.

Mr. Curtis proceeded to vindicate the right and capacity of women to take rank with men in the studio, the school-room—in all efforts for the social amelioration of both sexes, and concluded by ably and eloquently urging her claims to the right of suffrage, and answering all objections thereto. He was enthusiastically applauded throughout.—*Boston Journal, 6th.*

NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR JULY.

"With tossing and raking, and setting on cocks,
Grass lately in swaths, is hay for an ox.
That done, go and cart it and have it away,
The battle is fought, 'Ye have gotten the day.'"

JULY is the haymaker's month. Now we must bestir ourselves. The timothy, the red-top and the sweet clover, are all ready for the scythe. If you would have the hay-mow retain the true flavor of the hay-field, you must cut the grass while it is in blossom, and before it has lost its sweet aroma. It will then be tender and nutritious, and easy of digestion, and your milch cows in the winter will show you the difference between that, and hard over-ripe hay. Some farmers consider well-ripened grass more hearty, cattle will not eat so much of it, and they will be longer digesting it. It will do very well for oxen and horses. The ripened seed, if kept in the heads, makes up in some measure for the loss of juices in the stalk. But the difference in the milk-producing qualities will be very apparent to every observing farmer.

We must now be astir with the lark. The days are long, it is true,—but when were bright days ever too long? The music of the rifle upon the clear, ringing, keen-edged scythe, must wake the echoes of the morning. Now all hands are fresh and active, and the sweet breath of morning diffuses new life and vigor through all the frame.

Learn to swing the scythe with an easy, uniform motion, and keep yourself as much as possible in an erect position. Do not attempt to cut too much at one stroke, or to drive the scythe through the grass by main strength. Mowing does not require so great an outlay of strength as many seem to suppose. With the right stroke, and a keen scythe, mowing is pleasant work, especially when the dew falls in pearly drops before every stroke. "Make hay while the sun shines,"—but you must get it cut early to make, by the time the sun shines bright and clear, and then it will be ready to "set on cocks," before the dew of evening gathers upon it. Keep it stirring and tossing in the bright sunshine, through the middle hours of the day. Hay-making is busy work. There is no time for idling. Hay should be put into the barn warm from the field, and well stowed in the mow, and it will come out fresh and fragrant. But there's a cloud in the west, and the hay is not dry! What is to be done now? All hands afield with rakes and forks, and John, take the horse and wagon, and get the hay-caps from the harness-room, and bring them to the field, and we will be ready for the shower if possible. The cloud slowly rises and gathers blackness, but we keep steadily at our work, and the cocks rapidly multiply under our hands. Ah! there's a bright gleam of lightning and a sharp peal of thunder. It is time to put on the caps. Come, John, now for the caps and help me spread them on the cocks. That was a heavy clap—how majestically it rolls away and reverberates through the skies. One cannot help being struck with awe, at such manifestations of the Almighty Power. The rain will be here soon, but the caps are on, and, now let it rain! We have put them on in twenty minutes, and it will save us four hours' work tomorrow, besides the injury to the hay.

If instead of a shower there should be a storm

of three or four days' duration, the saving of labor and of injury to the hay, would nearly or quite pay for the caps.

"But," says my old neighbor, "all this is mighty expensive business. We used to get along very well without all this outlay for mowing machines and hay caps, and all this new fangled machinery." True, we did, neighbor, and when we were boys, we paid seventy-five cents a day for labor, and cut one ton or less to the acre, and fed it out to cows worth from eighteen to twenty-five dollars. Now we have to pay two dollars to mowers, and cut frequently two to three tons to the acre, and feed it to cows worth from forty to eighty dollars each. We must have our hay got in the right time, and well got, for such cows, and is it not cheaper to save labor by machinery, than to pay for it, at such prices as we now have to pay? We must keep up with the times, and make our arrangements to suit changing circumstances, or we cannot get along.

We said JULY is the Haymaker's month; but it is not wholly thus. The reapers must have their share of it. The grain as well as the grass must be cut in season. Do not let it stand till the kernel will shell out in handling the sheaves. When grain is ripe, it is liable to be injured by rains and wind. There is risk in letting it remain longer than is absolutely necessary, and when properly dried, the sooner it is housed the better. On the immense grain fields of the West they cannot, and do not attempt, to house their grain, but cure it in the shooks and stacks, and much of it is injured by the weather or destroyed by the birds and squirrels and mice.

With our small fields, this is not necessary, and would be for us a wasteful and slovenly way of doing business.

The cornfields and the garden must not be neglected in JULY. Weeds will grow in JULY as well as in June. The corn must have its last hoeing in this month. See that it is well done. Leave no weeds to bear a crop of seed for next year. Your root crops want frequent visits from the wheel hoe, to keep the ground light and mellow. The old saw says—

The twentieth of July
Sow turnips, wet or dry.

But for winter turnips, any time before the tenth of August will do, though that period is rather late. It is very convenient to sow turnips among corn, at the time of the last hoeing. Turnip seed costs but little. Scatter it broadcast among the corn and potatoes, and it will well repay for the labor.

The turnip takes but little from the soil, feeding chiefly upon the atmosphere, by means of its broad, pulpy leaves. If time can be found to plow up a piece of old pasture land, fence it, harrow in a good dressing of ashes or superphosphate of lime, and sow with turnips and grass seed; you will be quite likely to get a good crop of turnips if the autumn should prove favorable, and the land will be doubled in value for pasture afterwards.

We now begin to enjoy the fruit of our labor in the garden. Peas and string beans, and new potatoes and turnips, strawberries, currants and cucumbers are charming additions to our daily food, and if we are fortunate enough to have a few apples ripe in JULY, we shall know how to prize them, and to be *thankful for them too.*

COOKERY.

A writer in the New York *Spirit of the Times* says: The refinement of a family is nowhere so quickly seen as at a table, and nowhere do men's sensual, selfish instincts become more prominent. There is the centre of the family after the day's wandering; there its first meeting after a night of forgetfulness; there we give hospitality to the stranger, there the tongue is loosened, the wandering thoughts called back, and the heart is warmed into expression under generous fare. "He has eaten with me," is the Arabian talisman to protection, and the Christian has made a supper the emblem of his religion.

Then what constitutes a supper? Even the simpler half of a meal, being the food and its preparation, apart from its physiological bearings, is worthy of thoughtful study. As to that other half of a dinner, the people that are to sit around it, they being chosen only on festive occasions, to them I do not allude.

Equally important to a man's physical being, as to his moral health, is the character of the food on the table. It may be insufficiently cooked, crude, and indigestible; it may be overdone, sodden and heavy; it may be dried to a chip, until the nutricious juices are evaporated, or it may be fried to an oily mass that requires the strongest stomach to analyze. Then, again, the food that was originally ample and rich, may be so wasted by the culinary process, that what was once abundant is prodigally reduced.

One or the other of these faults universally affects nearly every dish that is placed on the American tables.

To avoid such evils, and cook sufficiently without wasting, and in the most economical quantities, is a high art of life, and one of the simplest and most overlooked. It is slighted by the intelligent and left in the hands of the ignorant; and those whose duty it is to govern, are punished in health and property for their neglect.

E. FOSTER, of Salem, Wis., writes us:—"I raised a quarter of an acre of sugar cane the past season, from which I made fifty gallons of very good molasses. I think I shall plant two acres another season." This is a substantial argument why sugar should be cheaper—and abundant reason why the *Journal of Commerce* and kindred sheets should *caution* (!) farmers against too great risk in its culture.

FARMYARD DUNG—PREPARATION AND APPLICATION.

No subject in the varied course of agriculture obtains a more general notice, or deserves a more important consideration, than the application of farmyard dung. The article is produced on all lands on which grains grow and animals are kept, and is the most efficacious of all manures that are yet known. It is a mixed body of straws and excrements, urinary and solid, possessing the quick action of the latter substances, and the more durable qualities of the former materials. All other manures are brought from foreign places, and purchased by a ready cost; farmyard dung is daily produced, and of a constant repetition. The use is varied and of a great value, and the application is no less important.

An approved and long-continued mode of preparing farmyard dung prevails in the celebrated turnip-growing Border counties, of placing the contents of the cattle-yards in square piles about six feet in height, in the corner of the fields to be planted with green crops. The yards are concave or dish-shaped, retaining and spreading the moisture equally over the mass, and supplied with straws that absorb all the moisture from rains, snows and urine. The contents are carried out at two different times during winter, and no pressure is allowed on the piles, except the weight of one or two persons to spread the materials evenly and thinly over the heap. In this condition, a fermentation reduces the heap into a saponaceous mass for use in May and June, and in a condition that is easily divided by hand-forks, well moistened, and from which the heat of fermentation has in most cases nearly altogether vanished. Much bulk is lost by this mode of preparation, but it is reckoned the best for the use of green crops.

Having been educated under the above system of preparing farmyard dung, I practised the mode with the usual success in various parts of the kingdom. In later years I adopted another mode, from the observation of a very large loss of bulk, and from a wish to use a fresher condition of the dung. At any times of convenience during winter, the contents of the yards are carried to the green-crop fields, and laid in a heap sloping at both ends, over which the carts pass to deposit the loads, and over which the materials are spread evenly and thinly, in order to mix the substances, and that no part remain in a dry state. The consolidation from the pressure of the carts prevents the fermentation of the heap, which is formed at convenient times, from November to the month of April, and later when the yards are duly moist and the straws thinly used. Potatoes are the first-planted green crop; and about ten days before the dung is required for use, the heap is turned over with forks, laid loosely together, and the lumps well broken, and the dry outside of the heap thrown into the middle of the new aggregation. A very active fermentation immediately commences, which is prevailing during the deposition of the dung in the drills, which are immediately reversed and the seed sown. This mode produces fully equal if not superior results to the first-mentioned preparation: it affords a larger bulk, and more convenience in forming the heaps at different times; while the former requires to be done at one time, or at not distant periods.

For some considerable time past, I have doubted the fermentation of farmyard dung, having had freshly-voided fæces, carried from the cow-shed, laid into drills for turnips, which were a superior crop to the parts of the field treated with fermented dung. This result happened on several occasions, constituting a fact, from a majority of similar results. In order to facilitate the application of fresh dung, I have long ago recommended that all straws for litter should be cut into short lengths by the thrashing machinery, and that the dung be mixed with the prepared turnip-lands by contrary workings of Finlayson's harrow, and raised into ridglets by one furrow of the common plow, in which the seeds are sown by the common two-drill machine, or with a portion of bones or guano by Hornsby's drop drill. This practice will supersede the fermenting heap of farmyard dung, and remove the objection of long straws not covering into the ground, by cutting into short lengths. The fæces and short straws will be convenient for Chandler's liquid manure drill, when Mr. Kemp's theory has advanced into a more general notice.

The application is most excellent of farmyard dung as a top-dressing of young grass seeds; and for that purpose, the fresh, strawy condition is preferable. The crops of clover are largely increased, and also the following crops of wheat. I have long ago suggested that the farmyard dung generally applied on bare clay fallows, for wheat, be applied as a top-dressing on the young wheats, in March, by means of moveable timber railways placed on the ground. But, most unfortunately, now-a-days, no opinion, theory, idea, or suggestion meets with any notice, except it emanates from a society or a club. Individuals languish in obscurity, and are held in insignificance.

The use of food being to produce caloric to plants and organic bodies, the chief considera tion is, how to apply the manures as food for that purpose, and, in order to yield that element in the least expensive manner and most ample quantity. I wholly dissent from chemistry—that rotten dung is more efficacious than fresh dung: weight for weight, and quantity for quantity, the latter must prevail in the abundance. The many statements made, of chemical agencies and transformations, are of small account.

With regard to covered and uncovered feeding-stalls, the former may suit in certain places; but in the majority of situations, the straw could not be reduced without the rains and snows that fall in the yards; and, under the covered sheds, the want of moisture produces a dry putrefaction. Even with the present open yards, much difficulty is experienced in reducing the straws into an impregnated condition with rain and urine.

I have not the pleasure of an acquaintance with Mr. Baker, of Writtle, nor do I know his appearance from sight; but I have ever admired the sound and enlightened judgment displayed by him on all practical subjects, and the strong sense that he brings to bear on the reveries of cognate auxilaries. These aids are but puny, shallow and evanescent; apt to dazzle and deceive, to bewilder and mislead; and often noisy as the tinman's trade. An enlightened practice must lead and confirm.—*Mark Lane Express.*

For the New England Farmer.

COLOR OF CATTLE.

We speak of the animals of one section of country as red, another as black—of one class as a mixture of red and white, another as fawn-colored, &c., &c., as though these characteristics were of a reliable character. Is it so? Can we predict at all from the color of the parents, what will be the color of the offspring, or is it chance entirely? We speak of the red cattle of New England—is this characteristic permanent? I make the inquiry to be informed, not having had sufficient experience to speak with confidence on the point. So much is said of color, in the description of animals, that it is well to understand how far this is to be relied on. Whenever we see an ox with a white head, the thought immediately occurs, has not that animal a streak of Hereford blood,—just as though this color was peculiar to this class. In speaking of the animals in some of the districts of Great Britain, they are said to be all black, or nearly so. So much so, that horned cattle generally are spoken of as black cattle. With us, it is very rare to meet an animal entirely black.

April 8, 1858. INQUIRER.

For the New England Farmer.

THOUGHTS ON COOKERY.

Your remarks, Mr. Editor, in reply to my inquiry about cooks, viz., that medicines are so mingled with all sorts of food, or nearly all sorts, now-a-days, that it is difficult to get anything that is unpolluted by them, and that there is scarcely anything that needs reformation more than our present modes of cookery, have emboldened me to say a few things in your paper, on which, otherwise, I might not have had the moral courage to venture. Yet I know, dear sir, that there are a few of your readers so tired of wearing the chains of a slavery more detestable, if possible, than that of man to man, that the discussion of this subject in a candid way, so as not to offend those who may not perceive its necessity, will be truly welcome. But I have no room for preliminaries, other than to bespeak forgiveness if I chance to repeat some things which I may have already said in other numbers of your valuable paper.

There are a few simple principles by which every truly Christian cook who wishes to be free —sent of God, and not of Satan—should be governed. Let me, in as few words as I can, present some of them for consideration. Others, of less importance, I omit.

1. No cookery is legitimate whose aim is to make it less healthy, less agreeable, or less nutritious than before.

2. No cookery is according to truth and nature, and, consequently, is legitimate—which even *permits* this.

3. No cookery is in accordance with the laws of God, natural and moral, which aims solely to bring the food to appetites which are acknowledged, universally, to be *fallen* appetites. The food being made right, our appetites should come to the food, and not the food to our perverted appetites. Hence, we should hear nothing about preparing food so as to have it relish. We should prepare it *right*, and habit will soon render it agreeable.

4. No food can be according to law—the law of God, I mean, not the law of custom—which is so operated on by cookery that its proportions are much changed from what the Creator intended. Thus the apple contains water, acid, and saccharine matter. Now to have it lawfully cooked, all these should be retained in their own proportions. To diminish or add to the water; or above all, to increase or diminish the acid with sugar by cookery, would therefore be a wrong. Nor have we a right to add to them any new ingredients, foreign or domestic; such as sugar, salt, pepper, spices, &c. I do not say, in this place, that they may not be eaten, but I do say that they should not be added to our food. They should be eaten by themselves, if at all.

5. That sort of preparation of our food which putrefies it, or even carries it through the first stage of putrefaction—whether we call it cookery or not—is far enough from being legitimate. Thus that which is prepared by fermentation, whether bread, cake, beer, or anything else, has passed through what may be called the first stage of putrefaction, and is hence a deteriorated article. In like manner, processes of cookery which hasten decomposition by diminishing the vitality, so to speak, of the article, are, to say the least, doubtful.

6. No processes of cookery are legitimate which have for their object to preserve food from decomposition, especially such as accomplish this object by depriving the article of its vitality by extra heat or by the addition of foreign agents, or medicinal substances. Thus the preservation of butter and meats by salt, spices, saleratus, saltpetre, and the preservation of cheese by rennet, salt, &c., is not in accordance with the laws of nature, and is, therefore, wrong. Drying substances very slowly by the fire or in the open air, is less objectionable.

7. All cookery which consists in part or in whole in adding to our food, while being cooked or afterward, any medicinal agents, even though not intended to preserve it from decay, is also wrong. Thus the addition of saleratus, saltpetre (or nitre,) cream of tartar, vinegar, mustard, catchup, pepper, allspice, ginger, cinnamon, salt, &c., is, by this rule, objectionable. For all these things and many more, which I could name are medicines. They are set down in our books as medicines—they ever were medicines—they probably ever will be so. The last three are *least* objectionable.

8. Lastly—for the present—Dr. Dunglison, in his "Elements of Hygiene," says, "that every made dish is more or less rebellious;" by which he must mean more or less objectionable. As an example of his meaning, he speaks, in particular, of the addition of eggs, as wrong. If eggs are wrong, butter is more so, milk also, and sugar; for all compounds into which these enter are *made* dishes. The French are said to have 685 preparations of which eggs form a component part, and we have probably hundreds. So of butter and lard; nearly everything, now-a-days, is besmeared or permeated by one or the other of them.

It is possible a few made dishes, if they deserve the name, such as farina mixed with farina, in

the case of brown bread, &c., may form exceptions to Dr. D.'s rule. It may also be observed, that certain cases which may be abnormal or diseased cases, may form exceptions to some of the other preceding rules; but they cannot be numerous, and their application belongs to the department of the medical men, rather than that of the hygeist.

Your readers may now judge for themselves, whether your statement is too strong, that our cookery needs reformation more than anything else. They may also understand, perhaps, how it is that while medical men, even we, of the old school, do not order for our patients, one-fourth as much medicine as we did fifty years ago, so much more is sold in proportion to the population. They eat and drink it daily and hourly—this is one reason. Hence the correctness of your own statement, that "half the trade of the apothecary has gone into the grocer's hands."

If any of your fair readers should begin to be alarmed, and to say that, at this rate, nothing is left for us to eat, or certainly to cook; let them recall their conclusion till I have time to show them a long list of dishes, longer perhaps than they will have patience to look over, which can be prepared without violating any of the foregoing rules, unless it be the eighth—hardly even that. Meanwhile, if they do not like to wait, let them look into my great work, "The Laws of Health," (at John P. Jewett & Co.'s) or into a little book costing about ten cents, entitled "Bread," written and published by William Hunt, of Boston, which, on the preparation of breadstuffs, contains more wisdom than many an "ample volume—mighty tome," which could be named, even though emanating from "high authority," and highly commended. W. A. ALCOTT.

Auburndale, May 10, 1858.

For the New England Farmer.

THE BONE SPAVIN.

FRIEND BROWN:—In your last monthly an inquiry was addressed to yourself or subscribers, as to a cure for bone spavin. Knowing nothing of the remedy you refer to, permit me to relate an experiment of my own with bone spavin, and the result, leaving parties interested to form their own conclusions. Some few years since, I became possessed of a fine family mare, that was, and had been for a long period, troubled with bone spavin. This, while it did not exactly lame her, seriously affected her gait when at full speed. Having in the stable one day a can of "rosin oil," it occurred to me to apply some of it to the mare's spavined joint, which I forthwith did, without any very definite idea as to the nature of the remedy or its probable effect. During that and the succeeding day, several applications of the oil were made, and I soon came to notice considerable inflammation over and about the joint, attended with a copious discharge of a transparent fluid resembling water. In a few days the hair came off where the oil had been applied, and the watery discharges continued through the pores of the now uncovered skin. This gradually ceased, however, and I soon had the gratification to find that instead of destroying the joint, as I began to fear, I had completely removed every vestige of bone spavin. This became known to a neighbor whose brother was in the livery business, and he has since informed me that both himself and brother subsequently applied this oil to bone spavin, and in one instance to incipient ring-bone, with complete success. It should be the first run of rosin oil. Mine was procured from the "Boston Oil Company's," Custom House Street, Boston.

East Woburn, May 12, 1858. L. P. D.

For the New England Farmer.

ASPARAGUS BEDS.

MR. EDITOR:—I wish to say a few words to you, and to have a few words from you, in regard to asparagus beds. From all my reading for the past fifteen or twenty years, I supposed that the only way to have a good asparagus bed, was to bestow a great deal of labor and a great deal of manure in its formation, as well as of attention to its proper position. A few days since, having an opportunity of getting some good roots, I thought I would make one, late as it is, this spring. I took my stored information into account, of trenching deep, two spades at least, or even two and one-half feet, manuring at the bottom very heavily, &c. I laid out a bed about sixteen feet square, and came to the conclusion before I got through with the digging, that if the operation was to be conducted on an extended scale, it would be well for humanity, if not for the asparagus, that an easier plan should be found. The idea of having eighty acres, (as Bridgman, I think, says one gardener has, who sends to the London market,) under cultivation, would require a life-time, and the fortune of the Duke of Devonshire, to supply the manure. Our farmers, I thought to myself, must have an easier method,—and so it turned out. I asked one of them, soon after, and this was the amount of the conversation.

Question.—How do you manage your asparagus beds,—do you trench?

Answer.—No, I plow two furrows.

Q.—How, both in the same line?

A.—No, I plow one furrow, and then return.

Q.—How deep, then, is your furrow?

A.—O, perhaps eight or ten inches.

Q.—Well, do you manure highly at the bottom?

A.—No, I believe I didn't put any manure in to the bottom of the trench.

Q.—Is your ground very rich?

A.—No, only medium.

Q.—You manure on top, then?

A.—Yes, a good deal.

Q.—When?

A.—In the fall.

Q.—Do you think this the best plan to follow, in managing a bed?

A.—I don't know whether it is the best plan or not, but from my bed I got, a few days ago, one hundred bunches for Boston market, and I thought that was doing pretty well.

I can't give you the size of the beds mentioned by the individual above, but it is enough to say, he is one of those energetic, practical farmers, that would hardly be content with one bunch of as-

paragus, where two could be had—unless the two cost more than they came to.

Now, Mr. Editor, what say you? I have looked over twenty-four numbers of the *Farmer* and only found one article on asparagus, and that not much more than an allusion to its cultivation. Shall we, gardeners on a small scale, trench over our ground, bury our manure, after the fashion of Bridgeman, Fessenden, Agricultural Reports of Congress, &c., or pursure my neighbor's simple, easy, comparatively economical method—and durable, too, for he says such a bed will last "any length of time?" A SUBSCRIBER.

Lincoln, Mass., 1858.

REMARKS.—The result of your "energetic, practical farmer's" experiment would lead us to travel in his path. Hundreds of people have been frightened away from raising asparagus because the common opinion has been that it requires nice and expensive operations to produce it. But it is not so; asparagus is a hardy plant, and will grow well, with little care, on a moderately rich soil. If manure is placed at the bottom of a trench two feet below the surface, the roots of the plant will find it; but even then it is doubtful whether that manure would be as valuable to the plant as manure placed upon the surface and dug under two or three inches in the autumn.

An idea that it is difficult to raise small fruits, such as currants, strawberries, raspberries, blackberries, &c., also prevails, and deters many from making the attempt, when they might easily have their tables spread with these wholesome fruits during the hot weather, when the system needs them in order to keep it in healthy action. There is scarcely any plant so easy to produce as asparagus.

THE PLANETARY SYSTEM.

According to M. Helmholtz, a number of singular peculiarities in the structure of our planetary system indicate that it was once a connected mass, with a uniform motion of rotation. Without such an assumption, it is believed impossible to explain why all the planets move in the same direction round the sun; why they all rotate in the same direction round their axes; why the planes of their orbits, and those of their satellites and rings, nearly all coincide; why all their orbits differ but little from circles, and much besides. From these remaining indications of a former state, astronomers have shaped a hypothesis regarding the formation of our planetary system, which, although from the nature of the case, it must ever remain a hypothesis, deserves special attention. The commencement of our planetary system, including the sun, must, according to this, be regarded as an immense nebulous mass, which filled the portion of space which is now occupied by our system, far beyond the limits of Neptune, the most distant planet. Even now we, perhaps, see similar masses in the distant regions of the firmament, as patches of nebulæ and nebulous stars. Within our system, also, comets, the zodiacal light, the corona of the sun, during a total eclipse, exhibit remnants of a nebulous substance, which is so thin that the light of the stars passes through it unenfeebled and unrefracted. If the density of the mass of our planetary system be calculated, according to the assumption in question, for the time when it was a nebulous sphere, which reached to the path of the outmost planet, it would be found to require several cubic miles of such matter to weigh a single grain.

HORSE TAMING.

This subject does not appear to be fully understood even by professional horsemen. The majority of horses which are denominated vicious, are on the contrary extremely docile and possessed of gentle natures, but as these admirable qualities are always associated with boldness and courage, such animals will not infrequently retaliate by kicking or biting their abusers. They never exhibit antagonism unless punished, or when made to perform some painful exertion, taxing them beyond their powers.

The horse inherits a greater degree of intelligence than any other useful animal of the brute kind. His instincts, in many instances, compare favorably with those of the nobler animal, man. If, therefore, a horse is obdurate and incorrigible, it is because he has not been understood; because his genius is superior to the person to whom his early education and training have been confided. Ignorant grooms, in breaking colts, use coercive measures, where kindness and gentle treatment are only appropriate. The first impressions of a young horse deprived of his liberty and the unrestrained following of his own inclinations, are almost certain to mark indelibly his future career, and make him either obstinate and intractable or submissive and affectionate. Thus, if he has been frightened and his nervous system excited beyond control, flogging or any harsh practice would confirm what originally was but an impulse, and make it a permanent habit.

Horses, like men, are more susceptible to flattery than chastisement. I will relate a case in point which occurred last spring, by which a promising thorough-bred, three years old, was entirely ruined in disposition. The animal in question was unusually intelligent, possessed remarkably elastic limbs and temperament, and was perpetually throwing up his heels and gamboling when not restrained by lack of space. A professional horse-trainer had contracted the job of reducing him to servitude. The first difficulty of catching the colt in an adjoining pasture was only accomplished after half a day's coaxing, and the utter demolition of the patience of the trainer. This individual, thoroughly exasperated, initiated the mettlesome animal into the virtues of a black whip. His efforts at resistance were terrific; he kicked and plunged, and made fearful plunges at his executioner; he was in the most intense state of excitement; the neck-veins became gorged with blood, and his eyes were projected far from their sockets. So ungovernable did he become, and so much was his indignation aroused by this surprising treatment, that after a period of a week had elapsed, the opening of the stable

door where he was confined was the signal for a continuation of the knocking and struggles which marked the day of his introduction to society. At the present time this colt is the most furious and vicious quadruped I ever saw, which is entirely attributable to the brutal flogging he received when it was unmerited, and before he could understand its object. Thus the superior intelligence which might have been cultivated into pre-eminent virtues, was turned into a channel for the fostering and development of his baser proclivities.

In breaking a colt, we should first endeavor to make him conscious of what is required of him. Fettering him with a halter for the first time, placing the saddle upon his back, fastening the girths, are all matters of paramount importance, and an intuitive knowledge of his idiosyncracies.

Before putting a halter upon a colt, he must be rendered familiar with it by caressing him and permitting him to examine the article with his nose. Then place a portion of it over his head, occasionally giving it a slight pull, and in a few minutes he will be accustomed to these liberties, and then the halter may be fastened on properly. To teach him to lead is another difficulty. Stand a little on one side, rub his nose and forehead, take hold of the strap and pull gently, and at the same time touch him very lightly with the end of a long whip across his hind legs. This will make him start and advance a few steps. Repeat the operation several times, and he will soon learn to follow you by simply pulling the halter. The process of saddling and bridling is similar. The mouth of the colt should be frequently handled, after which introduce a plain snaffle between his teeth and hold it there with one hand and caress him with the other. After a time he will allow the bridle to be placed upon him. The saddle can now be brought in and rubbed against his nose, his neck, and his legs; next hang the stirrup strap across his back, and gradually insinuate the saddle into its place. The girth should not be fastened until he becomes thoroughly acquainted with the saddle. The first time the girth is buckled it should be done so loosely as not to attract his attention; subsequently it can be tightened without inspiring him with fear, which if fastened immediately it would most certainly do. In this manner the wildest colt can be effectually subjugated by such imperceptible degrees that he gives tacit obedience before he is aware of his altered condition.

The recently introduced art of taming horses as practiced by Mr. Rarey, and which has given him an enviable celebrity in Europe, is one which in my opinion will prove of inestimable value, not only in training colts, but in eradicating the vices of the matured horse. Mr. Rarey's method is not new in this country, nor original with him, it having been practiced by circus riders in subduing and educating horses for their performances. The treatment is exceedingly simple, and consists in placing the horse in such a position as to render all his efforts at resistance abortive. Once convince him of your superiority mentally and physically, and his obdurate spirit is permanently conquered. The older the horse, the more the difficulty in vanquishing him, as he clings to his early impressions with astonishing tenacity. Last week I had the gratification of witnessing the taming of a horse by a *confrere* of Mr. Rarey practicing in this city—Mr. Caleb H. Rarey. The horse provided for the operation was a most incorrigible brute, extremely nervous, and apparently actuated by a desire to taste of every person who came within range of his mouth. Mr. Rarey approached him fearlessly, and after a contested struggle of two hours, the ferocious animal was entirely changed in disposition. In fact he presented a most pitiful and forlorn appearance, not only permitted Mr. Rarey but also the bystanders to take liberties which, two hours before, he would have resented in the most savage manner. Such was the wonderful influence of a few simple contrivances by which the horse was effectually prevented from offering successful resistance.

The art of horse-taming is to a certain extent known to the Mexicans. Throwing the lasso and entangling the animal in its meshes, so as to deprive him of his liberty, will produce similar effects in curing his obstinacy as Mr. Rarey's method, as the same general principles are involved. I am not permitted to give the details of this gentleman's practice, as secrecy was enjoined upon all who witnessed the performance. Any knowledge of the horse that will make him more useful to man cannot be too widely disseminated; and I sincerely hope that horse taming, with all the details of the operation, will soon find its way into the public prints, properly authenticated. The introduction of valuable thorough breds makes the subject of training an exceedingly interesting one, as in many instances the pure bloods defy all efforts at subordination.

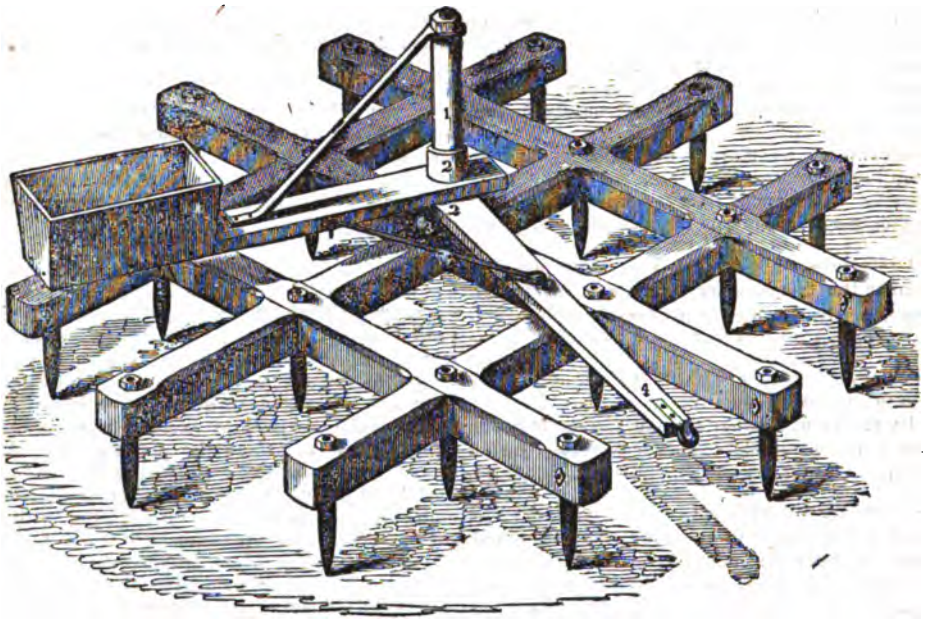
J. V. V., *in N. Y. Tribune.*

MARVELLOUS GROWTH OF VEGETATION IN THE HIGH LATITUDES.—Bayard Taylor, retracing his steps along the coast of Norway, after the lapse of a few weeks, says:—

"I was particularly struck, during the return, with the rapid progress of summer—the leaps with which she clears her short course. Among the Lofodens the potatoes are just coming into blossom and the rye and barley into head: the grass was already cut in many places, and drying on poles, and the green of the woods and meadows showed the dark, rich character of the northern lands. Owing to this rapidity of growth, all the more hardy varieties of vegetables may be successfully cultivated. Mr. Thomas informed me that his peas and beans at Kaafiord—latitude 70 degrees north—grew three inches in twenty-four hours, and, though planted six weeks later than those about Christiana, came to maturity at the same time."

Here is another popular illusion dispelled. What are all the marvels of tropical growth to this?

ARTESIAN WELLS IN ILLINOIS.—We learn by the *Prairie Farmer* that the above kind of wells are becoming common in some parts of Illinois, and that they are of the greatest necessity and benefit to farmers residing on prairies distant from living streams. There are about a hundred such wells in Iroquois county alone; their average depth is about one hundred and twenty-five feet, and cost about $200.



BUCKEYE ROTATING HARROW.

The above is a representation of the "Buckeye Rotating Harrow," recently patented by Wm. DeWitt and O. D. Barrett, of Cleveland, Ohio. The toothed frame is made of suitable sized timber, halved together, and fastened by the teeth, which have shoulders that come against the lower side of the timbers and nuts on the upper side. The centre-piece, 1, is made fast to the toothed frame by means of the cast plate, 3. The thimble, 2, has a flange on its lower end, by which it is firmly bolted to the draft bar, 4. The weighted arm is held on either side of the draft-bar, and at right-angles to it by means of a hook, as represented. A weight of twenty-five or thirty pounds is placed in the box on the weighted arm. This weight causes the teeth under it to sink deeper into the ground than the rest. As the harrow is drawn forward, they meet with more resistance, and consequently cause it to rotate horizontally, pulverizing the ground completely, requiring less force to draw it than it would, did it not rotate.

The advantages the patentees claim for this harrow, are as follows:

1st. It will do twice as much as the common harrow in pulverizing the soil, without any extra labor for the team.

2d. It is the strongest harrow built, and does not cost so much as the common jointed harrow.

3d. It is adapted to all kinds of soil, and can be operated like the common harrow, by taking off the weight. This is of advantage only in reference to newly turned up sod, requiring to be harrowed with the furrows.

4th. By the rotating motion, the teeth are made to move in every conceivable direction. Consequently, *they sharpen themselves.*

5th. This harrow leaves the ground smooth and even, as it is *impossible to clog it*, consequently stones, roots, vines, or other things, cannot be dragged along by it, to leave the ground in furrows, as it frequently is by the common harrow.

Messrs. Nourse, Mason & Co., of Quincy Hall, are making a few of these harrows for trial by our New England farmers.

For further information, address the General Agents, Robinson & Co., 21 Bank Street, Cleveland, Ohio.

WORKING AND THINKING.—It is a no less fatal error to despise labor when regulated by intellect, than to value it for its own sake. We are always in these days trying to separate the two; we want one man to be always thinking, and

another to be always working, and we call one a gentleman and the other an operative; whereas the workman ought often to be thinking, and the thinker often to be working; and both should be gentlemen in the best sense. As it is, we make both ungentle, the one envying, the other despising his brother; and the mass of society is made up of morbid thinkers and miserable workers. Now it is only by labor that thought can be made happy, and the two cannot be separated with impunity. All professions should be liberal, and there should be less pride felt in peculiarity of employment, and more in excellence of achievement.—*Ruskin.*

MANURES—VEGETABLE AND ANIMAL.

Everything which has grown upon the soil, even to the comparatively dry and unsucculent haulm or straw which most crops leave behind them, is capable of being transformed, by the chemistry of nature, into manure, or the pabulum of vegetable life.

By the term *humus*, we understand that portion of the vegetable structure, or organization, which is resolved, by fermentation, into mould; such as the foliage, the stems, and succulent parts of the stalks of plants, and even those portions of the more perfectly liquified or woody organism, which are broken up by the play of chemical affinities, and made capable, when rendered soluble by water, of contributing to the development and sustenance of plants. It is rarely the case, however, that *mere* vegetable matters are applied to the soil artistically. They are, for the most part, used in conjunction with animalized particles, which render them more energetic, efficient, and salutary in their effects.

Even the manure from the stable is by no means a purely vegetable substance, although formed of hay and grain. In every case, portions of matter rejected from the animal system, are mixed up with the vegetable mass—worn out, abraded particles, which are no longer of any service, and which are thrown into the common receptacle which receives the residuum of the food that has not been digested, and from which it passes in the form of excrement.

The poorer an animal is, the less of this animalized matter does it throw off; hence the well-known fact that the manure made by cows, oxen, horses, sheep and hogs, which have been well kept, is much more energetic and valuable than that furnished by those which have not been supplied liberally with food. The urine of every animal contains a certain portion of this animalized matter, and hence its superior value for agricultural purposes, and the high degree of vegetable fecundity resulting from its application to most crops and soils. The ammonia contained in this liquid manure also contributes, very essentially, to its fertilizing powers; but the animalized matter is that which chiefly produces its fermentation and putrefaction, without which it would be nearly or quite useless for manurial purposes, at least in its immediate effects. Other principles highly beneficial to vegetation are also contained in urine, many of which are derived immediately from the food upon which the animal is kept. This remark applies also to the solid voidings, and is illustrated by the following table, showing the constituents of fœces and urine.

In one hundred parts of horse dung, in a fresh state,—the animal having been kept on oats, hay and straw,—there were,

8.7 of biliary matter and coloring matter in a state of alteration.	
6.3 of mucus, (crude,) &c., &c.	
20.2 of non-digested vegetable remains and ashes.	
69.8 of water.	
	100.0

The quantity of ashes in this case was six per cent. Their constitution, according to accurate analysis, was as follows: In one hundred parts—

Phosphate of lime	.05
Carbonate of lime	18.70
Phosphate of magnesia	36.25
Silicia acid	45.00
	100.00

Urine from the horse contained, in one hundred parts—

Carbonate of lime	1.1
Carbonate of soda	0.9
Hippurate of soda	2.4
Hydrochlorate of potass	0.9
Urea	0.7
Water	94.0
	100.0

It will be seen that both these articles contain carbonate of lime, a substance valuable to vegetation in many ways, and they are also replete with other highly energetic and valuable principles. In applying manure to the soil—whether animal or vegetable—we should endeavor, in the first place, to ascertain the character and condition of the latter, and also the habits, character and requirements of the crops intended to be grown upon it. Whether we turn in green crops, or feed them to animals, and apply only their excrements, this information is alike essential to success. By applying to a vegetable, manure which does not contain principles congenial to its nature, or which does not enter into its constitution, we do not secure those advantages which we might derive if the manure were more appropriate to the plant which it is desired to produce. It is worthy of some study, therefore, to act understandingly upon this point, and to furnish such aliment as will be taken and assimilated by the system, for the support of which it is intended. By enabling ourselves to do this, we shall obviate no inconsiderable expense and trouble, and ensure a better success.

For the New England Farmer.

"SPARE THE BIRDS."

MR. EDITOR:—It is strange that after so much dissemination of a broader, deeper and more benevolent philosophy in regard to the value of the "sweet warblers of the grove," that there should be any person living under the influences of a genuine New England rural home, who can deliberately advocate the destruction of birds, especially "robin red-breast." The writer, J. B. R., in the last issue of the *Farmer* (May 1st,) is so far in doubt of the correctness of his dangerous views, as to call in the nominal authority of Moses to justify his conclusions. It would be difficult to name an iniquity which the selfishness of man has perpetrated, for which he has not sought a justification from the Bible. Without wishing to discuss Moses' views of "dominion," it must, I think, be clear to every enlightened head and heart, that the only "dominion" which God ever gave man over "birds, beasts and fishes," is the dominion which mind has over matter —the dominion of intellect over mere animal instincts. But where, save through the cravings of his depraved appetites and passions, does man find authority for laying under tribute all of God's animal creation, to gratify his passions or subserve a lazy and blind convenience? Because God has given to man "dominion over birds, beasts and fishes," by virtue of his superior endowments, it by no means follows that men may be tyrants by virtue of their power. The characteristic of tyrants is to destroy whatever stands, lives or moves in the way of their pleasure or convenience. "He who spake as never man spake," has assured us that the raven is fed by the fatherly care of its Creator, and that not a sparrow falls without its Maker's notice. These views, I know, are abstract, and will avail but little with such as seem to think all God's creation has been made for their especial benefit and convenience. Let us, therefore, appeal to the self-interest of such, and inquire whether the services which the "robin" is performing, are not far more valuable than a few or even all the "cherries?" The robin is well known to be the consumer of a vast multitude of worms, bugs, beetles and curculios, which if left without check, would destroy fruits far more valuable than "cherries," which in dog-days are no real estate, though pleasant and cooling, moderately partaken of. A long list of valuable services might be presented in detail, which not only the robins confer, but which are conferred in kind, by nearly all the birds which frequent the haunts of men, not even excepting the "villanous" crow, whose intelligence and sagacity often baffle the ignorant enmity of its pursuers.

But aside from material and transient interests involved in the destruction of birds; what man is so dead to the spiritual teachings of animated nature, whose soul is so unstrung to the "music of the birds," as to find it in his heart to ruthlessly shoot them down for the paltry reason that they partake of some of the bounties of their Creator—that they deprive their lordly masters of a few "cherries" or other small and quickly perishing fruits? Who would not give up his daily repast of cherries for a few days or even weeks for the soul-inspiring "music of the birds" —their joyous carolling from "early dawn to dewy eve?" He who has no heart for the companionship, the joy of life and gladness of the song of birds, should forthwith seek the crowded and dusky haunts of city life. I cannot speak calmly in view of so cruel, unjust and injurious a proposition as that of "killing the robins," or any other of our almost domesticated birds. If it is right or expedient to kill the robin, then we had better encourage our boys to the wanton practice of destroying their nests, and thus prevent the increase of an evil, instead of taking pains to cure it. Does not such a rapacity as would kill the birds for pleasure, convenience or even temporary profit, feed and keep alive a spirit of vindictiveness and hatred towards real or supposed enemies of our kind? Is the shooting of robins the best moral lesson and the most refined pleasure we can give our sons? Even if it is certain that the birds do us some real injury, are we for this reason to destroy them, and thus teach our children that they may destroy whatever gives them inconvenience?

I apprehend that the killing of any of our birds of the air or forest, under our present meagre and imperfect knowledge of the "unkindly offices" which they fill, would be like wielding a giant's club in the dark—more likely to injure a friend than foe.

I will not allow any shooting of birds upon my farm, and I would that every farmer well consider both the temporal and spiritual welfare of himself and family, and of the community, before he suffers his farm to become the hunting-ground of idle and vicious sportsmen. "Spare the birds."

Westboro', May, 1858. T. A. S.

For the New England Farmer.

BEE-HIVES.

I am aware of the confidence placed in the opinion of those who have experience in the subject under consideration, even without their reasons. Lacking the experience of many in bee culture, I gave what I thought good reasons for differing with Mr. Quinby, in the opinion that a rough bee-hive was the cheapest. He has given his reasons for leaving the inside of a hive unplaned. I will fully concur with him, for the reasons he gave, that it is unwise to place a large swarm of bees in a hive having nothing for their support but a plane polished surface. I beg leave to add that the "single case reported," was in a hive furnished with a very simple device, designed to aid the bees in supporting themselves until they could commence building their comb, affording a more sure support than could be had on an unplaned board, not only affording a support to the bees, but so arranging them that they would, almost invariably, lay the foundations of their combs, where a skilful engineer would have placed them, having for his design, economy of building material, the filling of the hive to the best possible advantage, and a thorough ventilation of the whole, after the work was completed. A hive thus filled may be as thoroughly ventilated when standing in its usual position, as it is possible to be when inverted, and the bottom board removed, as Mr. Quinby recommends in his winter management of bees. If the hive is inverted the chips from unsealing honey, dead bees and other offend

ing substances must lodge among the combs, there to remain among the bees until they can remove it in the spring. In the hive to which I referred, the refuse matter will fall upon the bottom board, to be removed by the apiarian at pleasure.

Of the adaptation of bee culture to New England, of the profit and pleasure it affords the bee-keeper, when properly managed, I need not write. But of the losses and disappointments which have followed the efforts of many who have attempted bee culture, the greater part have arisen from the thousand and one inventions of men, to improve the habitation of the honey-bee, none of them improving or even changing its habits or instincts, in the least. As the first thing we can do for a swarm of bees is to furnish it with a house, I deem it of the utmost importance that it should be as near in accordance with their nature and habits as may be. "AMICUS."

East Washington, N. H., 1858.

HOG-YARD COMPOST.

In the immediate vicinity of your hog-pen, have a yard, strongly and permanently enclosed, and of sufficient size to afford ample accommodation to the number of swine you intend to keep. Into this cast as much good muck, chip-manure, sods, forest scrapings, loam from the road-side, saw-dust, refuse hay, straw, haulm, and weeds that have not gone to seed, as will, when firmly compressed, form a stratum of one foot in depth over the whole yard. On to this let whatever liquids can be spared about the premises be directed, such as suds from the wash room, the wash from the sinks, a portion of rain water from the eaves, and whatever else that can be obtained that possesses any virtue. These fluids all contain more or less fertilizing matters, and if mixed with the other materials, will induce a thorough fermentation of the whole mass, and secure its preparation for the use and sustenance of crops.

A few quarts of corn, peas, buckwheat, or other grain, scattered over and dug into the manure, or dropt into holes made with an iron bar, will operate as an inducement to the swine to root and turn the mass, and thus effect the thorough incorporation of all the parts, so that, by their assistance, and the effects of a proper degree of fermentation, you will have, in the end, instead of the crude collection originally deposited, a perfectly homogeneous article of great richness, and at a moderate expense.

We mention the labor of the swine in this connection because it is a popular belief that they can be thus profitably employed; it certainly admits of a question, however, whether that belief is not fallacious. That is, whether the labors of swine in rooting up, turning over and mingling the common manure heaps of the barn, cannot be more cheaply performed by men, at common wages. In order to raise pork profitably, we must avail ourselves of two things, viz.: get a *great weight*, and at an *early age*. Can this be accomplished by *working hogs*, for well-fed ones will not work much.

Is it not, then, better to feed swine, from the beginning, with as much nutritious food as they will eat up clean, and with a good appetite, when they will remain quiet and lay on fat and flesh with great rapidity?

If the manure made from the process described above is intended for light arenaceous soils, in which there is a want of cohesibility, it would be well to add a liberal percentage of fine clay to the other ingredients, wherever that article can be easily obtained. This is the constitutional alterant which such lands require, and, with the organized and decomposable constituents of the mass, will produce most immediate and favorable effects.

By applying this earth in the compost, it will be found, that, although the quantity annually used, may be small, it will, in time, produce an important change, and secure a good degree of retentiveness and productive energy to lands ordinarily too light for the profitable cultivation of any crops but rye or corn.

There can be no doubt, we think, that the running of well-fed hogs on manure heaps is of great value to them; such hogs will not root much, while their constant droppings, especially the liquid portions, are of the most valuable character. Where they run over horse-manure heaps, they keep it compact, preventing the admission of air, and that rapid heating which quite often nearly destroys it. At any rate, in one or the other of these ways, or by partially using both, a large and valuable heap of manure may be annually secured from the hog-yard. Now is the time to begin the process.

HARD CEMENT.—The following cement has been used with great success in covering terraces, lining basins, soldering stones, etc., and everywhere resists the filtration of water. It is so hard that it scratches iron. It is formed of ninety-three parts of well-burned brick, and seven parts of litharge, made plastic with linseed oil. The brick and litharge are pulverized, the latter must always be reduced to a very fine powder; they are mixed together, and enough of linseed oil added. It is then applied in the manner of plaster, the body that is to be covered being always previously wet with a sponge. This precaution is indispensable, otherwise the oil would filter through the body, and prevent the mastic from acquiring the desired degree of hardness. When it is extended over a large surface, it sometimes happens to have flaws in it, which must be filled up with a fresh quantity of the cement. In three or four days it becomes firm.—*Scientific American.*

For the New England Farmer.

WOMAN AND THE HOUSEHOLD.

MR. EDITOR:—I see by quite a long article from the pen of Dr. Alcott, that he seems fearful I do not fully apprehend him. Were this the first time he has said the same, I should be disposed to pass it again in silence; but in justice I would say, his expositions are so lucid, that I consider the idea of misapprehension entirely precluded, if his articles are read with attention; and could he know the interest with which I ever regard what falls from his pen, and how much of my life has been squared by his rules and precepts, he might think, perchance, he is the one who misapprehends. He may call this compliment, or whatever he chooses; it matters not farther than justice is concerned; and yet I feel I have the same right to an opinion of my own, and the same right to express it that he has, though it be at the risk of disagreeing with him, or "calling him out," even.

I know not which of your correspondents have reproached or ridiculed him—for myself, I would not knowingly stoop to either. If I have said aught that he or any one else has so construed, they have greatly erred. If this does not give the doctor satisfaction, I should be very glad to have him address me personally. I will meet him half-way, and that is as much as he can ask of any woman. I have many things I could say to him that would not perhaps particularly interest the readers of the *Farmer*, and I would be the last one to mar the beauty of its fair columns by allusions to personal differences or private feelings farther than justice demands.

He calls upon me or somebody else to tell him "by what right we spend precious time—God's precious gift to man—in changing articles from better to worse," &c. Now allowing we have no right, who shall tell us just how much we may spend? how much of each day shall be given to the culture of "mind and heart," and how much to the care of the body? Who is to blame for the "misdirected efforts" of woman, and who shall teach her just the amount of labor necessary to bestow upon the "brain, stomach and skin," and how much upon the "lungs, heart and muscles?" Who will take the lead in a reformation in such a manner that the mass shall be willing to follow? If that dark-visaged personage whom the good doctor mentions, sends us cooks and dressmakers, what proof can the doctor give us that he has not already sent us "schoolmasters and lawyers, doctors and ministers" as much? To whom, then, can we look? who shall draw the dividing line for us poor women?

In regard to the mere physical labor of woman, I think if he would inform himself, he would not find it less than it was fifty years ago—it has only changed its form. Instead of the spinner, weaver and dyer, we have the palm-leaf braider, the chair-seater, the boot and shoe-stitcher and binder—besides the thousands who congregate in the different kinds of manufactories.

Every mother ought to be competent to oversee her own tailoring and dressmaking—but if those who can afford the expense, shall give the labor to the poor seamstress, that she too may be benefited—who shall dare to complain?

If the doctor knows but one mother in all Massachusetts, who is cook and dressmaker, let him fill his carpet-bag with choice books and then step into the cars some pleasant morning in June—when earth is robed in her richest green and "every warbler's throat's in tune," and ride till he is fairly out into the country. Now he may take a walk among the laboring community—go into their homes—sit by their hearthstones and hold converse with them; to the poor he may give a book to cheer them on in their labors, to the rich he may sell one; he may come to our manufacturing town and see the amount of labor performed by the women and children, or he may go to the green hills of western Massachusetts, among the farmers and dairy-women, and observe the amount of physical labor there called forth. If this does not satisfy him of the truth of my assertions, let me point him to where the tall grass may wave and the church shadows fall above the resting-place of more than one much esteemed or dearly loved friend, who has laid down the burden of an over-tasked life ere its meridian, and left her children, and her place to be filled by another.

But like the doctor, I have said more than I intended; and if he thinks me a bungler with the pen, he must wield it in future himself, and allow me to make the bread.

MRS. H. BARLOW.

Gardner, Mass., May, 1858.

For the New England Farmer.

ROTATION OF CROPS.

The word *rotation*, when applied to agriculture, signifies a succession of different crops instead of a succession of the same crop. It is known that the preparation of elementary substances that enters into the composition of plants, is not the same in all. Probably it is not precisely the same in any two plants. The soil containing the substances for the growth of plants, imparts them as needed, till nothing remains, when the plants will cease to grow. Supposing a particular ingredient for a particular plant were lime, it is evident that when the lime is all exhausted, or drained from the soil, that plant can no longer be produced on it. So also of other plants, and all other substances which compose them.

The rotation of crops grew out of experience. The farmers observed that in most cases, when the same plants were grown for two or three years, consecutively, upon the same soil, it did not yield the same abundant harvest, but when another crop was tried upon that soil, the product was satisfactory. Therefore, observation and experience gradually introduced an alternation of crops. There may not be an entire failure the second, third, or even the fourth years; but each succeeding year, all other things being equal, there will be a diminished crop. But other things may not always be equal. Drought or cold may destroy or greatly injure a crop of Indian corn one year, and the next year, there being no drought, and an abundance of heat, the crop of corn may be far better than the preceding year. The soil, too, may be so amply furnished with a particular substance for vegetable growth that several crops of the same plant may be raised in succession, before material diminution will be

perceived; but this makes no exception to the principles for a general rotation. Sooner or later this substance will be exhausted, and there would then be a complete failure.

A single crop of wheat may so deprive the soil of one of its mineral constituents, that another crop of wheat would not grow upon it, and yet the soil may still contain abundant mineral constituents for the production of a good crop of clover or turnips. There is no fixed period for a complete rotation. Four, five or six years, is the usual time, unless it be for lands that may advantageously remain a longer period in grass. Rotation may be prevented by keeping up an annual supply of the fertilizing agents of the soil equal to what is taken away by the plants.

Farms were formerly divided into meadow, plow or tillage land, and pasture, and each section was permanently used for these specific purposes, till the meadows were covered with moss, and the tillage ground was so impoverished as to yield inferior crops. The Flemings are the first known to have made rotation a fixed part of their system of agriculture. They insisted that where it was practiced, the land did not need rest, and it was this system which gave their husbandry a pre-eminence over that of every other country at that period. In Scotland, it has been pursued with the very best results. It was also introduced into England, and has become general there, and it is now constantly gaining advocates in this country. I should be pleased to hear more on this subject. J. E. WIGHT.

Hatfield, Mass.

For the New England Farmer.

PEARS ON QUINCE STOCKS.

MR. EDITOR:—I have read with interest the various suggestions that have recently appeared in your pages on this topic. It would seem, earlier fruiting can be attained by the use of the quince stock, and when it is particularly desirable to test the variety, this process may be worth following. But when the purpose is to secure permanent trees of superior character, I have seen nothing that commends the insertion of pear scions upon the quince. On the contrary, I am apprehensive that those who have purchased such trees from nursery puffs, will be doomed to have their hopes disappointed.

It is said pear scions set upon apple stocks, will flourish for a few years and then decay. If this be fact, it is a good reason why it should not be done. Without question, pear scions will grow well on pear stocks. This being so, those who would have pears in greatest perfection, should be careful to start right in their culture. In this, as most other things, "the best way will be found as good as any."

May 8, 1858.

REMARKS.—We do not quite agree with our intelligent correspondent in regard to this matter. We can show him pear trees on *quince stocks* that *have been bearing* for more than 25 years, frequently a barrel of pears each, in a season, and that promise now to bear well for 25 years to come. They are set only 8 or 10 feet apart, and have proved themselves a capital investment. Plant pear trees on pear stocks if you please,—but unless already enjoying an abundance of pears, do not hesitate also to use the *quince stock.*

For the New England Farmer.

HOW TO OIL A HARNESS.

We all know that it is of great benefit to oil our harnesses, yet many of us neglect to do it, because we regard it as a dirty job; but it is easy enough, if done right. My process for doing it is as follows:—First, I take the harness apart, having each strap and piece by itself; then I wash it in warm soap-suds. I used to soak it in cold water for half a day, as others did, but I find that warm water does no harm and much facilitates the job. When cleaned, I black every part with a harmless black dye which I make thus:—One ounce of extract of logwood, twelve grains bichromate of potash, both pounded fine; upon that I pour two quarts boiling rain-water, stirring until all is dissolved. When cool it may be used. I keep it on hand all the time, in bottles. It may be applied with a shoe brush, or anything else convenient. If any one objects to the use of this blacking, fearing that the bichromate of potash it contains would injure the leather, I would just say that this kind of potash will not injure leather, even when used in a much larger proportion. The blacking generally used contains copperas—a sulphate sometimes made of oil of vitrol and iron, and it is found that it will eat out the life of leather, unless used with great caution. When the dye has struck in, I go through with the oiling process. Some have a sheet-iron pan to oil in, which is better than anything; but I have a sheet of iron nailed to a board; it is about two by three feet square. This I lay upon a table; I lay a piece or part of the harness upon this, and with neats-foot oil applied with a paint brush, kept for the purpose, I go over it, oiling every part; and thus I proceed until every part is oiled. The traces, breeching, and such parts as need the most, I oil again. For the last oiling I use one-third castor oil and two-thirds neats-foot oil, mixed. A few hours after, or perhaps the next day, I wipe the harness over with a woolen cloth, which gives it a glossy appearance. Why I use some castor oil for the last coat, is, because it will stand the effects of the atmosphere, the rain, &c., much longer than neats-foot oil, consequently the harness does not require oiling so often, by its use. One pint of oil is sufficient for one harness.

The common way of oiling a harness, is to apply as much neats-foot oil containing lamp-black as the leather will take up; then washing off with castile soap and water. This way is not so good as mine, because it makes the harness smutty, and also the soap that is used contains barilla—a strong alkali, which cuts up and feeds upon the oil in the leather, and the weather, especially if rainy, soon renders the harness stiff and unyielding as before; the wax in the threads is also destroyed, and the stitching gives way. I have experimented with different kinds of oil, and find that the kind, and the process, I now use is the best. J. HART.

Portsmouth, N. H., 1858.

For the New England Farmer.

FEEDING SHEEP—REARING LAMBS.

MR. EDITOR:—In the May number of the monthly *Farmer* there was a communication from Solon H. Berry, of Vermont, on the feeding of sheep, which concludes as follows:

"It is generally understood in this part of Vermont that a breeding sheep will do better not to be in very high flesh, or as the saying is 'fat as a hog.' As this is an important question, I would like to hear the experience of some of our Vermonters upon it."

Although I am not one of "our Vermonters," still I feel some interest in the subject, and will venture to give my opinion.

That sheep will do better, bring more healthy and stronger lambs in a stinted, half-starved condition, or even with decent fare, than with high feed, is contrary to my experience, and it seems to me to be reason and common sense. In all my experience in keeping sheep and raising lambs, extending through a period of nearly twenty years, and being in the habit of feeding higher, probably, than most people, generally giving them corn for some weeks previous to lambing, I never lost a lamb when I was led to think it was in consequence of my sheep having been in too high flesh.

I am willing to allow that my sheep under the above described treatment, were not generally "fat as a hog," and I think it is no very easy matter while they raise one or two lambs each year, to keep them so; still, I have endeavored to come up as near to that point as the nature of the case, and a proper respect for my corn-bin, would allow. I believe that sheep kept in high flesh, with a full flow of milk, are much less likely to disown their lambs.

I have, at the present time, twenty ewes and thirty-one lambs. There are nine pairs, one triplet, and ten single. I have lost none. I do not say that I have ever done any *better* than this, but do say that in several instances, so far as loss is concerned, I have made out as *well*.

I apprehend that the real cause of the poor success of many in raising lambs, lies, not so much in the fact of their sheep having been kept in good condition through the winter, as from some cause or causes a little further back. It requires but a slight acquaintance with the subject to convince one that there is a vast deal of difference in breeds of sheep; some kinds being naturally much more inclined to bring weak and sickly lambs than others. Then, again, many flocks of sheep that formerly did well and brought good lambs have probably degenerated in consequence of sufficient attention not having been given to crossing, a point of vital importance to success in raising good lambs.

I have practiced for a number of years messing my lambs. I have a small enclosure adjoining the sheep pen, with an opening large enough to let them through and keep out the sheep. They will generally begin to eat by the time they are two weeks old. For the past five or six weeks my lambs have taken from twelve to sixteen quarts of meal per day. I am not very particular as respects the kind of meal, though I rather prefer equal parts of corn and oil meal. I have twin lambs at the present time, not far from two months old, that will weigh nearly sixty pounds. If in addition to the meal they have plenty of good hay in a crib by themselves, they will require but little else. They will not be continually worrying the sheep, so that not only the lambs, but the sheep, will be in much better condition on turning to grass than they otherwise would. I have never discovered any injurious effect from giving my lambs so much meal, although I always let them eat all they will. S. D. C.

Sunderland, May 15th, 1858.

For the New England Farmer.

A SPRING CAROL.

BY THE "PHEASANT BARD."

Now Spring calls the farmer afield to his toil,
And cares fill the lengthening day;
But hope gives him cheer from the fresh crumbling soil,
And the sweet-scented airs round him play.

Enchanting the songs of the birds, as I rove!
O'erhead,—near-at-hand,—far away;
The hymnings of nature—the warblings of love,
Poured forth on the brightness of day.

There's the same little bird, with the same little song
I heard when a loitering boy,
By the runny brook-side, the soft catkins among,
And sighed for his holiday joy.

But *wish* of the boy, still is *scant* in the man;
Life's real, though misnamed a dream;
Youth's visions give place soon to plotting and plan,
And carefulness sobers their gleam.

Ah! long is the road! and how rugged the way,
The past and the present between!
My vision would pall at the desert survey,
But for patches of "gold and of green."

When the sun settles low, and the oxen are tired,
And slow moves the ponderous plow,
Then robin, dear warbler! by pity inspired,
Carols "cheer up! cheer, O!" from the bough.

And evening an elfin-like music awakes;
From the marsh comes the merriment shrill;
The softened winds creep thro' the green springing brakes,
And the moon rises red o'er the hill.

Gill, Mass.

ANIMAL TRACKS OF THE CONNECTICUT VALLEY.

Among the most deeply interesting papers read before the Scientific Convention at Baltimore, was one by Professor Edward Hitchcock, upon the tracks of animals found in the Connecticut Valley. He described the valley as classic ground for these sandstone tracks, ten times more of them having been found there than elsewhere the globe over. As to the age of the rocks thus marked, he had recently concluded that a portion of them, at least, were as modern as the Lias formation. The cabinet of Amherst College contains 8000 individual impressions of these tracks. Professor Hitchcock said that most of his time for two years past had been given to grouping the individuals. He had made 119 species and 60 genera of them. He made 31 bipeds, 55 quadrupeds—18 having more than four feet, 12 without feet, and three of uncertain footing. Upon this he dwelt the more, because in the *Annual of Scientific Discovery*, he had been incorrectly reported as giving up his theory that

they were bird tracks. Among the quadrupeds he had concluded, but without evidence that entirely satisfied him, that five were marsupials—the youngest of the mammalials. Of the bipeds, 14 were of the thick-toed birds, like the ostrich, and 9 of the narrow-toed tribe. These statements of the most accomplished judge of such matters in the world, and a man of great caution, give us astonishing glimpses into the period when such a variety of extinct monsters went tramping or writhing up and down the valleys of New England.—*Boston Journal.*

For the New England Farmer.

UNDERDRAINING.

MR. EDITOR:—Taking some interest in underdraining, theoretically, I have read three articles in your late numbers on this subject—two by S. F., and one by Mr. Nourse—with a desire to get some clearer views upon an agricultural topic now exciting much attention.

I understand your correspondent S. F. to combat the idea that "*all* land requires to be drained." This he seems to do with a quiet smack of self-satisfaction, though the notion has not much vitality, in this country at least, and according to his statements, but little in England. He may, however, have killed this feeble extravagance, yet at the waste of some of his best ammunition. Strike lightly on the weak!

In speaking of the dampness of the soil of Great Britain, your correspondent observes, "English farms may perhaps need draining; American farms need irrigation." This may be true—but certain it is that both soils need just moisture enough for the proper development of roots, and no more. S. F. it would seem, is unacquainted with the theory of underdraining, or else some of its benefits were forgotten, or thrust aside as problematical, when he penned his articles. Underdraining, as I understand it, by carrying off the surplus water, equalises the *temperature* and *humidity* of the soil during the summer months, while it deepens and improves it by giving it a freer circulation of air, which at night is cooling, and leaves in its apertures *moisture* in the form of dew, which it would not do in a hard or baked state of the soil. Figuratively, underdraining gives greater lungs, and consequently more vitality to the land subjected to it. Porous soils, and those not having a hard, impervious pan ten or twelve inches beneath their surface, may not need underdraining, as the air passes freely through them, and moisture may be drawn up from a greater depth by capillary attraction.

And let me say here (though I may refer to it again) that the idea of the salts washing out and running to the ocean, need excite no fears for a soil so retentive of moisture as to need underdraining.

My friend S. F. may have seen low lands with more or less water standing on their surface in June. In July it may have evaporated (not sunk;) and in August the soil is hard and cracky. In surveying such a piece, after wiping off the perspiration from his face and making his "bow," he would probably exclaim—"Inscrutible powers, what a dry piece of land is this! Plague on our hot summers! It's 'a deficiency of moisture, not an excess,' that American farmers have to fear and guard against. But if we can't get showers, mulching would be the remedy, if not expensive and impracticable, to prevent the evaporation." A friend might suggest underdraining. "That would only carry off the water the sooner! Draining is preposterous. But it is a self-evident fact, that as the water is gone, it needs irrigation."

But I may be doing S. F. injustice; for he says in his last article, that in the United States "draining will be confined to swamps and low lands." It seems by this that he would drain swamps and low lands. He cannot, however, mean those which lose their water in a drought and become baked, for this would be draining soils already parched up, and which, as I understand him, need "irrigation"—at least in the latter part of the summer. I suppose, then, he means those lands only which present water to the eye the year round! I venture the opinion, after some little hesitation, that his "good company," Prof. Nash, would differ with him here.

And here I would notice his California fact, which asserts that the "river bottoms," so called, are only cultivated there, which soil is constantly moist, "almost to its very surface." The soil there," it is stated, "which is not thus kept filled with moisture, bakes and cracks in the dry season, and cannot be cultivated at all, until by some means the land shall be irrigated."

Now this land, which he would irrigate, (a frequent and expensive job,) in my opinion, should be underdrained. By this operation the water would *sink*, not *dry up*, and the land would become porous and well ventilated, and would preserve a proper and almost uniform moisture perhaps for half the year; and being thus porous, would not be so liable to crack, and would probably be rendered very valuable for the purpose of cultivation, even without irrigation.

But S. F. would demur at this, especially if it were underdrained with tile; for he says, "I object to tile draining that it is exhaustive," for it "hastens the decay of vegetable matter in the soil," as its advocates say, which he thinks would be "far more encouraging to the race of farm skimmers than to those who wish to improve the soil." The sooner the vegetable matter is used up, the sooner the land is exhausted! There is undoubtedly vegetable, no less than mineral matter, deep in the soil, which the plow will not turn up; and S. F. seems to think that it should remain there undisturbed and unpenetrated by the roots of plants and by the decomposing and life-giving influence of the air, because, forsooth, the sooner you get at it and use it up, the sooner the land, will become exhausted! This most every one would regard as poor economy. Good farmers spread manure on their soils with the purpose of raising crops. These crops imbibe the manure, and, using it up, tend to exhaust the land. Would it be well to plant nothing, so that the manure may remain in the soil?

By laying drains three or four feet deep, we get a far deeper soil, of nearly as good a quality as on the surface, and hence a greater resource; for water, air, manure and warmth all penetrate it. And when the roots are attracted by deep nourishment, they will strike deeper for it and flourish greatly by it. "The roots of our corn

and other crops will, under favorable circumstances," says Prof. Johnston, "descend to a depth of four or five feet." What practical farmer does not know, that the best way to avoid the effects of drought, is to deepen the soil? Annually many of the deeply penetrating roots would be left in the soil, for they are larger, and more of them, and would serve as pabulum (supplying the carbonic acid) for new crops—having all the elements of their decomposition brought down to them. Such, at least is the opinion of one, that tile draining "is exhaustive." But if *tile* draining is exhaustive, is not stone or other kinds of draining? And would not underdraining, by any means, be exhaustive to "swamps and low lands," to the draining of which S. F. seems to interpose no positive objection?

As to the salts of the manure or soil being washed away (alluding to this point once more, as it stands out prominently in the communication under notice,) lands that are not all gravel have an affinity for lime, soda, ammonia, &c., in their common manurial forms, and probably absorb them as they are retentive in clay or vegetable humus; so that little of them could be washed out until the soil was sufficiently supplied with them, and then if a little escaped to "the ocean," it might well be spared. Urine is said to be tasteless when leached through a body of soil, having left its salts in the earth.

"What we lack is bottom to our farms," said the Connecticut farmer. Undoubtedly, where the subsoil is a loose sand, under a few inches of surface mould, it is too porous and of an improper nature to retain the manurial agents. Neither underdraining, nor perhaps any thing else would improve such soil. But while some lands have no bottom, others have a hard one too near the surface, and still others are all bottom. Underdraining would undoubtedly be of benefit to the two last. The desideratum is to get the bottom in the right place.

Your industrious correspondent writes with commendable feeling, though he seems to entertain a spite against the English notion of underdraining, the absurdity of which seems to him as "plain as way to parish church." Some of his points, however, prove too much for the harmony of the others—besides elaborately combatting (as before observed) the idea of *universal* drainage, the benefit or economy of which very few admit. D. W. L.

W. Medford, April 18, 1858.

For the New England Farmer.

YOUNG MEN AND WOMEN ON THE FARM.

MR. EDITOR:—Why is it that so many of our young men and women are inclined to dislike an agricultural life? Is it because the work is too hard, or because there is no pleasure in it, or is it because they think it degrading? or because the occupation is unhealthy? These questions properly answered, would be of public consequence.

1. They are not brought up to take an interest in that branch of industry. 2. They think they can live easier in some other occupation.

I do not say that all ought to remain upon the farm, but I think that if they are rightly encouraged, there will be more thus inclined. Let children obtain a good education, for we want what are called educated farmers, and the more the better; it is not the farmer only, but educated *farmers' wives* that are wanted, so that they can have an even yoke together. I am sorry to say, that, in my opinion, there is not more than one in twenty of the young women properly educated for a farmer's wife. Let us hope that these things will receive more attention and be corrected in the future. J. E. WHITMAN.

South Londonderry, Vt., 1858.

LYON'S PATENT COPPER LIGHTNING CONDUCTOR.

Lightning rods constructed upon proper principles and properly applied, are undoubtedly an important protection to our buildings, but if they do not possess these qualifications they are absolutely worse than no rods, as they invite the fluid to themselves without possessing the power to convey it harmlessly away.

With regard to this particular rod, we prefer to give the opinion of CHESTER DEWEY, Professor of Chemistry and the Natural Sciences in the University of Rochester, N. Y., to giving one of our own.

"The use of copper is proposed for *two important* reasons: First, its high conducting power of electricity, and second, its less exposure to oxydation in the atmosphere. It is agreed by philosophers that the conduction of copper is from six to eight times that of iron, and that in either metal the conduction is dependent upon the surface, and not upon the solid contents of the metal, or that the greatest surface conveys the electricity with more facility. Hence, while the flattening of the rod increases the surface, with less weight, the conduction is augmented. As copper is a better conductor of heat than iron, the larger surface of moderate thickness is the protection against the fusion of the rod by any discharge of lightning. The rusting of iron diminishes its conducting power, but copper is far less liable to rust.

The fixings of Lyon's Rod comport with the best arrangements of other rods. The part which projects above the building is made adequately strong, and the terminating points are to be fully silvered or gilded. The passage of the rod into the earth should be to a point of permanent moisture. Every man who seeks this protection should look to this point and be satisfied fo. him-

self, as dry earth is an insulator, and may prevent the protection. An iron rod may form an adequate protection; a copper rod must be a safer instrument, and as it will not rust, it may, on the whole, prove the more economical of the two. The amount of protection and security is the great object."

For the New England Farmer.

"ERRORS ABOUT THE HONEY BEE."

MR. EDITOR:—Such is the title of a short article in a late number of the *N. E. Farmer*. The statements therein made are partly true, and partly false. First, it is true, that the wax of which the comb is made is a *secretion* from the honey bee, and is only worked when there is sufficient warmth in the hive as to make it quite soft, or plastic. This is one great reason why comb is made much faster during the night than in the day time. In the former case, the bees being all in the hive, their apartment is warmer, from the animal heat, than in the day time, when many of the bees are off in the fields, gathering honey, &c. A stock very much reduced in number, can build no combs, even when honey is plenty in the flowers, simply because there are not bees enough to produce sufficient heat to make the wax in working order. It is true also, that when bees gather pollen, or bee bread, they make a *business* of it, as much so as they do in gathering honey, and the two are seldom or never done by the same bee at the same time. The honey bee does one thing at a time, and thoroughly does it.

Again, it is *not true*, that the honey bee can manufacture honey, or that he has any contrivance, or apparatus for this purpose. If this was the case, bee-culture might be made a very profitable business. This question can be easily settled by any one who has bees. I have tried the experiment time and again, and always with the same results, for the bee is true to its instinct, and that instinct cannot be much, if any, improved, or changed by art. She has no laboratory for making honey. She has a wonderful instinct for *gathering honey*, or sweets of any kind, and wherever she finds these sweets, she fills her honey sack, carries it to her house, and then deposits it, just as gathered. If it be honey when taken into her sack, it will be honey when ejected from it; if it be molasses, or sugar, or these combined with any other ingredients, it will be the same when deposited in the comb, nothing more or less; if there was no true honey in the mixture, there will be none, after passing through the honey sack of the bee. Of this *fact* any one who keeps bees may satisfy himself, without much trouble. The mixture, molasses, sugar, or whatever it may be, may have the peculiar smell of the bee, but it is not honey; there has been no change, its chemical character is the same as it was before being taken up by the bee. I shall have more to say on this subject at a future time. In regard to gender, I have used the feminine, though the working bee is a neuter, and very properly so called, as the microscope reveals no organs by which to designate its sex. The different classes of bees, which make up the family, will constitute a future article. NORFOLK.

King Oak Hill, 1858.

EXTRACTS AND REPLIES.

A BOOK ON AGRICULTURE FOR COMMON SCHOOLS.

Do you know of any book on the subject of agriculture suitable to be introduced into common schools? W.

Newport, N. H., 1858.

REMARKS.—Yes sir. The Massachusetts Board of Education, as long ago as the year 1839, took a noble step in introducing some work on the subject of agriculture into the common schools of this State. That Board contracted with the late Honorable Judge BUEL, of Albany, to furnish a suitable work, and he compiled, principally from his own writings which had been previously published in the *Cultivator*, a work which we have always referred to with entire confidence. It was introduced into our common schools, but with what influence we are not able to say. It ought to be there again—in every school of every district in the Commonwealth, and, in our judgment, would lead to incalculable benefits to those successively entering upon the theatre of life. It is entitled, "*The Farmer's Companion; or Essays on the Principles and Practice of American Husbandry.*" It is written in a plain, common-sense style, and now that we have been occasionally referring to it for more than ten years, feel free to say that we have not yet found a paragraph in it which would lead a novice in farming into error. The book is now published by the Harpers, and is for sale for about fifty cents a copy by *John Raynolds*, at Concord, this State, or at this office.

PRACTICAL FARMERS AS WRITERS.

I often observe articles in your paper which speak in strong terms in favor of agriculture, and I am much rejoiced to see them. But never, or rarely ever, do the writers say anything as to themselves being farmers. Now some men are not apt to pay much attention to theoretical farming; they do not like to hear anything on the subject from any one who is not a practical farmer. To such I would say, turn to a recent article headed "Hard Times," and read it; I say Amen to it, and to all others of a like character. I hold the occupation of cultivating the soil to be as honorable as any other occupation in the world, to say nothing of the profit and true happiness there are combined in it. O. A. C.

Easthampton, April 26, 1858.

HALL'S HAND POWER STUMP PULLER.

If "*A Subscriber*" at Pittsford, Vt., had sent his name with his communication—as all correspondents ought to do—we could have communicated with him. As it is, we have sent one of Mr. Hall's Circulars describing his Stump Machine, to "A Subscriber," Pittsford, Vt., where he will probably find it at the post-office. *Nourse & Co.*, 13 Commercial Street, Boston, are the Agents for New England.

MASSACHUSETTS DAIRY COWS.

Seeing the communication of "Essex," in last Saturday's *Farmer*, I thought that I would state a fact or two, in confirmation of his opinion; *i. e.* that Massachusetts dairies produce more butter to a quart of milk, than do the dairies of England and New York, according to Messrs. Horsfall and Holbert. Mr. L. P. DEMPSEY, of this place, has a cow that gives fourteen quarts of milk per day, and seven quarts of it make a pound of butter. Her feed is English hay, three quarts of shorts and three pints of meal a day. In the next barn is a cow, owned by Mr. ISAAC DEMPSEY, which gives *sixteen* quarts of milk per day; seven quarts of it make one pound and one ounce of butter. Her feed is English hay, three pints of meal with *no* shorts. Neither of these cows was bought for anything extra, but if any one thinks they can beat them, let them try.

Danvers Centre, May, 1858. H. O. W.

CHEMICAL ANALYSES OF CORN-COBS.

Have you the analysis of the corn-cob, made by Dr. Jackson? If so, please give it to us, as an aid to judge of the profit or loss to be made in grinding and using the cob for feed.

Groton, 1858. CORN COB.

REMARKS.—Below we give an analysis by Dr. CHARLES T. JACKSON, of this city, of two samples of Indian corn—one grown in Rhode Island and the other in Massachusetts. The Doctor says:—

The following analyses were undertaken with the view of ascertaining how much nutritive matter is contained in the cobs of Indian corn, and also how much of each mineral salt they had extracted from the soil upon which they grew. Never was a more important subject laid before me than the investigation of the chemical nature of the Indian corn plant, since it concerns the chief agricultural industry of our people. Were as much time and expense devoted to the analyses of our staple crops, and the soil in which they are cultivated, as there is annually expended on metals and ores, how soon would the farmer reap the advantage of a truly scientific and profitable agriculture. The age demands progress in this science, and, I trust that, ere long, complete investigations will be made in the other parts of this valuable plant, as well as in several others among our economical products.

Analysis of the Corn-cob from the Farm of Thomas Andrewe, in Smithfield, Rhode Island.—This corn was produced by admixture of the two varieties, "Canada" and "Red-cap." It was remarkably prolific, with a very small cob, weighing only 124 grains.

The matter soluble in ether, alcohol and water was found to be in the following proportions: In 100 grains of the ground cob, the whole amount dissolved was, 3.145 grains, or about 3½ per cent. of the cob.

	Grains, or per cent. of cob.
A sicative yellow fixed oil	0.323
Sugar	0.242
Dextrine (gum) and some albumen and extractive	2.557
	3.122
Loss	0.023
	3.145

The saccharine matter did not crystallize, and probably is identical with grape sugar or glucose.

Analysis of the Ashes of the "Tuscarora" Corn-cob.—This corn was grown at Long Meadow, on the Connecticut river, in Massachusetts. It is a large-grained corn, very rich in starch. The cob weighed 630 grains. When burned it gave 12.2 grains of ashes, which yielded, on analysis, nearly 2 per cent. of the cob.

	Grains, or per cent. of cob.
Potash	0.6480
Soda	0.1970
Silica	0.0714
Phosphate of lime and magnesia, and oxid of iron	0.0600
Phosphoric acid	0 0600
Chlorine	0.0630
Unburned carbon	0.1430
Oxid of iron, carbonic acid, and loss	0.6590
	1,9364

POULTRY.

I wish you would inform me which is the largest breed of poultry, and where I can procure the eggs, as I wish to breed for the market.

Newburyport, May, 1858. W. W.

REMARKS.—Shanghaes, Cochin Chinas, Chittagongs, and other large fowls, are scattered all over New England; it is probable that all these are in your town. But the *largest* fowls are not always the best for market. A mixture of Shanghae with our common poultry is better than the pure of either. The *White Dorkings* are common, and all things considered, perhaps the best breed of poultry we have. The cocks are handsome and bold, the hens good layers and good mothers. They are plump, have rather short and yellow legs, and the flesh is juicy and sweet. When nicely dressed they are always attractive.

EGYPTIAN AND HUNGARIAN MILLET.

Is the Egyptian and Hungarian Millet seed for sale at the seed stores in Boston? What is the price, and which is the best kind? W.

Newport, N. H., 1858.

REMARKS.—The Egyptian millet would be about as profitable to raise for stock as rail fences would; it does not ripen well here, and is altogether unsuited to our New England purposes. The Hungarian millet seed may be purchased at Nourse & Co.'s, 13 Commercial Street. But why not sow the common millet, *Panicum miliaceum*, about which there is no question, which grows rapidly, ripens its seed, and is an excellent plant for soiling stock, or gives you capital seed for young poultry?

PACKARD'S WHITE STRAWBERRY.

In consequence of an article in your paper of May 1st, I was induced to obtain some of the above plants, which will undoubtedly prove to be nothing more or less than the old white wood strawberry, a *discarded* variety. I give this timely hint that others may not meet with the same disappointment. E. W.

Dedham, May 29.

PLASTER FOR POTATOES—TIME TO SET YOUNG APPLE TREES AND TO PRUNE OLD ONES.

I wish to inquire on what land it is best to apply plaster, wet or dry?

Also, what is the best time for setting young apple trees, and for trimming old trees? Is it best to put manure under young trees, or to set them without any?

A SUBSCRIBER IN VERMONT.

REMARKS.—Use the plaster on your dry land. Set young apple trees in the spring any time before the leaves start—but if more convenient set them in the autumn, after the leaves have fallen. Old, well rotted compost will be useful about the roots, but if the manure is all fresh put it away from the roots about the sides of the hole which has been dug to receive the trees. Apply fresh manure in the autumn, and dig it under two or three inches below the surface.

☞ *Never prune an apple tree in the months of March, April or May.* All the borers in the world do not commit half the havoc in our orchards, that the pruning-knife and saw do, applied at the wrong season of the year. In the spring the sap is abundant, thin and active, and where limbs are taken off it passes through the pores of the wood to the surface, and coming in contact with the atmosphere, becomes bitter and acrid, runs down the bark and poisons it, so that it is often killed quite into the wood. This is what causes most of the *black lines* so frequently seen on apple trees, and which, in thousands of cases, ends in the death of the tree.

Old men persist in pruning in the spring, because they think it the most convenient time, and because their fathers did. *Young men* may entertain no fears that there will be too much orcharding, so long as old men continue the habit of mutilating and poisoning their trees.

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CANKER WORMS.

In reading your last *Farmer*, I was informed that the canker worm had hatched; let me advise that as soon as they are large enough to string down by their webs, and before the trees are much damaged, tar the trees, then with a pole or otherwise, give the limbs a sudden jar, and the worms will string down by their webs; then with a pole strike them down to the ground, and in a little while you will find them stuck in the tar as they attempt to ascend the tree. Take a warm day to dislodge them, beginning about 10 o'clock, A. M. Employ all hands while the work is going on, and not leave until every worm is on the ground, and the trees are safe.

Rockville, May 22, 1858. P. W. MILLER.

—

VERMONT AHEAD.

Mr. ISAAC ALLEN, of Salisbury, Addison Co., Vt., fattened a pig, which was killed April 15th, at 360 days old, and when dressed weighed *five hundred and ninety-four pounds.*

E. H. WEEKS.

EGGS OF THE GUELDERLAND FOWLS.

Can you, or any of your subscribers, inform me where I can obtain eggs of the pure Guelderland, or Devereux fowls? G.

Marblehead, Mass., May 3, 1858.

—

SALT FOR MANGOLD WURTZELS.

I would like to know the meaning of "Don't forget the salt," in Mr. Lowes' letter to Mr. French, with regard to mangolds. I am planting some this spring, and others are turning their attention to the mangold wurtzel in this vicinity.

Norwich, Vt., May, 1858. W. D. BAXTER.

REMARKS.—Salt, in England, is considered one of the best dressings for this crop—Mr. Lowe is of opinion that it will invariably greatly increase it.

For the New England Farmer.

UNDERDRAINING.

Much has been said and written upon the subject of land drainage, and with some effect; but if we are to judge from the thousands of acres that now lie waste in every State in the Union, it would seem that there is yet room for much to be done.

Probably, every owner of a large farm has many acres of land now entirely useless, on which nothing is grown but coarse grass or other semi-aquatic plants, which might, with a little judicious expenditure, be brought into a state fit for growing any useful product of the soil—and, indeed, be the best land for farming or gardening purposes.

Land drainage is becoming a science, and will yet be practiced very extensively in the United States; not only will the land, now flooded with water, be reclaimed, but much of the upland, which now bears moderate crops but has a tenacious subsoil holding stagnant water within a few inches of the surface, will be made earlier, lighter and warmer by thorough drainage; and the farmer will find it a profitable investment, paying a much greater per cent. for the money invested, than bank stock, railroad stock or rented houses.

Much of our swamp land lies very level, and many owners consider their particular pieces undrainable, "because there is no fall,"—they may even have dug a few ditches hither and thither over the piece, but to no purpose, for want of a good outlet, the one made being, perhaps, on the highest part of the land. Unless an instrument has been put upon the land and the inclination carefully determined, the owner's impression cannot be depended upon, and in such a case is usually erroneous. It may be impossible for the unaided eye to detect the slightest descent in any direction, and yet the land have a sufficient inclination for thorough drainage. A few minutes' work with a spirit level would settle this question, and leave the farmer with some practical knowledge of the inclination of his land and the proper course for his drains.

There is no danger that too much water will be taken from the land, for all soils which are so tenacious as to need draining at all, will hold in suspension as much water as can be used by the

crops, and when the surplus water is carried off, the drains will stop discharging. The fact that most drains discharge throughout the year is an evidence of their value.

Stagnant water having no other means of escape from the soil, will be partially carried off by evaporation; this process causes the land to be very cold, sometimes making a difference of from 10 to 15 degrees. If a certain amount of water is evaporated, a certain amount of heat must, of course, be used up in evaporating it. It is found, I believe, that 10 degrees of heat are required to evaporate 1 pound of water from 100 pounds of soil, and that heat might, but for the water, have been used in raising the temperature of the soil. Water also prevents the summer rain, which has passed through the heated atmosphere and the heated surface of the earth, from passing down deep into the soil, carrying the warmth it has gained above to the roots of the plants, which would be much benefited by it; it also prevents air from coming to the roots by stopping up the pores.

Warm land is early land, and it is often that a piece which has been drained can be planted a month earlier than the same piece before draining.

Some crops may be grown to moderate advantage on cold lands, but there are others which cannot be grown on such land with any profit; if, therefore, we wish to increase the variety of produce, we must drain the land. If land is saturated up to within a few inches of the surface, then much of the water that falls upon it during a heavy shower, finding no chance of passing down through the soil, will run off upon the surface, carrying many valuable properties, and from year to year impoverishing the land. Drainage should be so thoroughly done as to allow no surface-washing unless the land stands very steep or the rainfall is very heavy.

Boston, May, 1858. J. HERBERT SHEDD.

THE FARMER'S MOTTO.

Gen. Bierce closes an Agricultural Address, at Twinsburgh, Ohio, Sept. 17th, 1857, as follows:—"Let the farmer's motto be, then, 'good farms, good stock, good seed, and good cultivation.' Make farming a science, in which your heads as well as your hands are employed; let there be system and reason in all your operations; study to make your farms beautiful, and your lands lovely; entice, by kindness, the birds to visit, and cheer your dwellings with their music; I would not associate with the man or boy, that would wantonly kill the birds that cheerfully sing around our dwellings and our farms; he is fitted for treason and murder. Who does not, with the freshness of early morning, call up the memory of the garden of his infancy and childhood? the robin's nest in the old cherry tree, and the nest of young chipping birds in the currant bushes? the flowers planted by his mother, and nurtured by his sisters? In all our wanderings, the memory of childhood's birds and flowers are associated with our mother and sisters, and our early home. As you would have *your* children intelligent and happy, and their memory in after life, of early home, pleasant or repulsive, so make *your* farms, and *your* children's home."

For the New England Farmer.

IS FARMING PROFITABLE?

BY WILSON FLAGG.

What is the meaning of this question, and what is the signification attached to the word profitable? Is it intended to be applied to those occupations only that lead to riches; or ought it to be applied to every honest and healthful employment that affords to the intelligent and industrious a good livelihood, and may lead to competency? It is plain that the question respecting the profitableness of farming cannot be answered, until we have fixed upon the definite meaning of the term, and an intelligible limit to its signification. Some men would refuse to call any business profitable, by which they could not double their capital as often as once in two or three years; others of equal intelligence believe themselves to be very profitably employed, as long as their income affords them a sure and comfortable support. The experience of mankind has determined that six per cent. a year is a reasonable profit on capital, because by investing in any kind of stocks that afford a greater rate of interest than six per cent., the safety of the capital is endangered. This is a law of trade which might be explained by a process of reasoning too lengthy to be introduced in this connection. We will at present deal simply with the fact that almost all property which is perfectly secure yields but a low rate of interest.

It seems reasonable, therefore, that in order to determine the profitableness of farming, we should consider whether the farm and farm stock will yield six per cent. of their rateable value. After adding this interest to the sum which the owner of the farm—if he be a farmer—can earn upon it by his own hands, we might compare its profitableness with other safe kinds of business. Estimating the farmer's own time as worth two dollars a day, leaving out holidays, it may be called $600 a year. If his farm, his buildings and stock be valued at $7000, the interest of this sum in six per cent. stock would be $420. The farm, therefore, with his own labor upon it, ought to yield him about $1000 a year, or its equivalent, to be considered profitable, on a moderate, but just and liberal calculation. The question is not strictly whether it yields so much money, but whether it enables him to live as well as the majority of men in other business whose income is but $1000 per annum.

There is a great deal of difficult and tangled reckoning to be used, before a farmer can arrive at the exact amount of his own profits. A merchant's clerk who receives $1000 a year, may easily make an exact estimate of his profits and expenses, provided he lives upon his salary alone. His profits are the amount of his salary. His expenses may be easily recorded in an account-book. We will suppose one of many cases. Our merchant's clerk lives in the suburbs, about ten miles from his office. His travelling expenses of all kinds may be set down at $150; his house-rent, $150; butcher's bill, $125; grocer's and baker's bill, $200; shoes and clothing, $175; help, $75; miscellaneous expenses, $125.

Our farmer, knowing the salary of the merchant's clerk, who is his neighbor, believes him to be in a more enviable situation than himself.

"He has no capital, yet without it he earns about as much as, on a moderate calculation, I ought to obtain from the profits of my farm united with those of my own labor. Yet I work as hard as any one of my hired men, and at the end of the year, when I compare my profits and expenses, I am obliged to call my own labor almost nothing, or reckon the interest on my property as nothing, in order to satisfy myself that I have earned half as much as the merchant's clerk obtains by writing eight hours a day. It must be true that a farm is poor stock, and that farming is unprofitable business. Seven thousand dollars, the rateable value of my farm, if invested in safe bank stock, would yield me a sure income of $420, which would amply support me and my family, if we preserved our present economical habits."

The merchant's clerk arrives in the middle of the farmer's soliloquy, and invites him to compare notes. The clerk insists that the farmer is better off than himself, even on the supposition that the clerk could be always sure of his salary. "You remark," says the clerk, "that your farm is so much capital sunk; because with the aid of it you can earn only about as much as you could probably earn with your hands in other business without it; and only half as much as I can without any capital. You have taken only a speculator's view of the case. Let us consider it in an economical point of view, and I think I can prove your condition to be better than mine. You contend that you ought to earn as much I do, to be equal with me. You would then have this advantage over me; your farm is a sort of anchor of your fortune, which must prevent its being entirely wrecked. I have no such anchor. You would be satisfied if your farm and your labor yielded you $1000 a year; but you deny that they yield you more than half that sum. I think I can prove the contrary.

"It is difficult to make an accurate estimate of family expenses in your case, and proportionally difficult to estimate your profits. If you want a head of cabbage or half a peck of potatoes before they are stored, you take them from your grounds, and do not credit them to your farm. When I procure the same from the market, I pay five cents for the first, and fifteen cents for the other. You should, therefore, charge five cents for every cabbage, and fifteen cents for every half peck of good potatoes consumed in your family, to the credit of your farm, when you are comparing notes with me. The same you should do with relation to every other article of your produce and consumption, however insignificant, for which I am obliged to pay money; because if you were in my situation, and had neither garden nor farm, each of these trifles would assist in forming an aggregate of very considerable amount, in the course of the year! Farmers do not always take these trifles into their account, when they compare their own condition with that of their neighbors.

"With us these trifles are luxuries, and we pay a high price for many things which are so abundant with you that you are willing to waste them. Your farm furnishes you with these luxuries at apparently so small cost, that you regard them as unworthy of any account; yet if you examined every item of my expenses, you would find a very considerable sum laid out quarterly for these things. Fifty dollars a year, at least, is required to furnish my family with articles that might be classed under this denomination. So much, therefore, in comparing your circumstances with mine, is to be passed to the credit of your farm.

"I pay $150—my travelling expenses—for country air. This costs you nothing, but it is to be subtracted from my salary, and brings me down $150 nearer to the standard you have assumed for your own profits. Many a merchant residing near Boston, has paid a thousand dollars or more, for an acre of land adjoining his house, to be used as mere space, and kept in grass as a pleasure ground, and which after all is as needful for health as for pleasure. This is a luxury which the wealthy only can enjoy in the suburbs of the city. All the inhabitants of the city are obliged to pay a heavy tax for water. It is the multitude of such expenses that renders it so difficult to live on a small income in the city.

"If my income is double yours, while you can obtain with five hundred dollars, all that I can obtain with one thousand, it is plain that your five hundred is equivalent to my ten hundred. I am supposing that you live in every respect as well as I do; that you have as many comforts and conveniences, and as many luxuries as I do. This is undoubtedly true of our farmers compared with our salaried men. I believe the majority of farmers, whose farms range from $2000 to $8000 in value, live as well as the same number of salaried clerks, teachers and clergymen, whose salaries range from $500 to $1200 a year.

"But you reply that we live more at ease. It is true that we perform less corporeal labor, but we suffer more confinement. We have more ease, you more independence. We are obliged to wear better clothes than you. It is one of our misfortunes that we are obliged to dress according to an expensive style established by custom. This furnishes another article of expense which is much greater than yours in the same department. We are, with our families, more directly under the tyranny of fashion than you are. This difference between us constitutes one of your advantages."

Farmer.—"In the world you are considered a gentleman, and I a clown."

Clerk.—"I will be candid, and will admit that in certain situations, as in a ball-room, or at a tea-party, we should probably be received with more favor than you. But were American society to be graduated as it is in Europe, you landowners or yeomen would be placed some degrees above us clerks and salaried men, who are dependents. At political meetings you have at present more consideration than we. A farmer, other things being equal, is more likely than a salaried man to be elected a representative to the General Court, to be made a Justice of the Peace, and to be elected to many other political offices. We clerks, obtain, comparatively, but little political consideration. The account is, therefore, very evenly balanced between us. If we are received with more favor in social circles, you obtain a great deal more in political circles, because your property, though small, lifts you above want, and makes you independent."

Farmer.—"This may all be admitted; but I have often thought that if I could have sold my property for cash in early life, and invested it in

trade, and become myself a trader, I might now, at the approach of old age, have been independently rich. But I have not increased my property, because the profits of my farm have only afforded me a living."

Clerk.—"Perhaps it would have been so. But while you were shaking the dice of trade, fortune might not have favored you. The chances would be against your ultimate success. The statistics of trade show, that only a small proportion of those engaged in it make an independent fortune, and more than half of them die with insolvent estates. Still it is not to be denied that trade or speculation affords almost the only chances for becoming rich. The farmer of moderate possessions cannot grow rich by agriculture. But it would be idle to say for this reason that farming is unprofitable. I cannot grow rich upon my salary; but I do not, on this account, deny that my occupation is profitable. I am willing to admit that any business is profitable, that ensures one a comfortable livelihood. But your situation is better than mine, inasmuch as while it affords you a comfortable living, your farm secures you from absolute want, which is liable to come upon me, were I to lose my health, or to be turned out of employment.

"In conclusion, I would say, that if you desire wealth, you must engage in trade and speculation, with all their risks and dangers; if you desire the appearance of wealth, without fortune and without independence, be a clerk or an office-holder; but if with only small possessions you would enjoy both freedom and independence, and obtain dignity and respect, which are better than *gentility*, and with all these more than an average amount of the comforts of life—keep your farm."

For the New England Farmer.

FRUITS OF NORTHERN CALIFORNIA.

The following account of the fruits indigenous to the region about Humboldt Bay was received from a young man who resides at Union, on the Bay, and who has devoted some attention to the subject. As this is comparatively a new field for the study, it may not be uninteresting to have a brief description of the species he enumerates.

The native Crab Apple is found there, the same kind as that in our western States. The Service Berry, the bushes of which are low, the fruit in clusters as large again as the common bilberry, and very good. The wild Olive has fruit about the size of the seedling olive; when in blossom their fragrance fills the air. There are several kinds of Currants, some of which are very ornamental when in flower; there are also several species of Gooseberries, one of which is covered with prickles, both bush and berry; there is another which has no prickles, and resembles our wild purple variety. There is another berry which resembles the currant in size and form; the bush is much like the whortleberry. The Salal berry grows there; this is described by Kenrick in his Orchardist as being about the size of a common grape, of a purple color, of a sweet and pleasant flavor; it grows in clusters. The Salmon berry, which is a species of raspberry, is found in abundance, and he esteems it the best berry he ever tasted, and thinks it highly worthy of cultivation; there are some under culture in his garden at Union, on the Bay. The black raspberry, running blackberry and whortleberry are abundant. There are several species of berries which are said to be poisonous, whose names are not stated.

No nuts grow near the coast, except Hazlenuts. In the mountains are other kinds. The forest trees in the vicinity of the Bay are principally redwood, Oregon pine and occasionally ash, alder, maple, and a few other species. On the mountains are seen oak and several kinds of pine; there are several kinds of shrubs which are very ornamental. The myrtle is an evergreen and has clusters of blue flowers; the wild syringa is very fragrant when in flower; the snowberry is a native there. O. V. HILLS.

Leominster, Mass., 1858.

THE MILK PLOT THICKENS, BUT NOT WITH GOOD CREAM.

The few facts which we stated last week in relation to frauds in milk in this city, have caused some persons to look nearly as blue as does the article which they vend for milk. As we believe that it is better to *prevent* crime than to punish for it, we give below the law of 1856, upon the adulteration of milk, so that those who offend may know what the legal penalty of such crime is.

AN ACT TO PUNISH FRAUD BY THE SALE OF ADULTERATED MILK.

Be it Enacted, by the Senate and House of Representatives,

That if any person or persons shall adulterate, by water or otherwise, milk to be sold in this Commonwealth, or if any person or persons shall sell, or cause to be sold, milk adulterated by water or otherwise, knowing, or having reason to believe the same to be so adulterated, he or they shall be held guilty of a misdemeanor, and on conviction, be fined twenty-five dollars for the first offence, one-half of which shall be paid to the complainant, and for every subsequent offence fifty dollars, one-half of which shall be paid to the complainant, or by imprisonment in the House of Correction not less than two nor more than six months.

Approved by the Governor, May 30, 1856.

We hope the city press will generally copy this law, and thus cut off the apology of those whose consciences do not accuse them, if any such there be. It will somewhat interfere with their traffic, to be sure, and make it slightly inconvenient for their *profits*, and they will not like it.

"No rogue e'er felt the halter draw,
With good opinion of the law."

We tender our thanks to those persons who have voluntarily given us new facts in regard to this mean and iniquitous traffic, and shall only use their names or facts to sustain the ground we have assumed. We hope no more persons will write us anonymously; give us your names; "tell the truth, and shame the devil," and let consequences take care of themselves. We have a few more "rods in pickle."

For the New England Farmer.

FARM LIFE IN WINTER.

At this season of the year the farmer enjoys, comparatively, a period of rest. His crops were gathered and housed in the mellow autumnal days; and now, when cold winter comes and touches with an icy wand, brooks, rivers and lakes, covering them with a crystal mantle, he can glance with a contented mind at his well-filled barns and granaries, feeling thankful that his lot has been cast in "pleasant places." His eyes will be refreshed with the sight of generous heaps of golden maize, looking more truly valuable than the metal whose color it bears; while barrels of darker, rich looking rye, boxes of tri-cornered buckwheat, and bins of lighter oats, all tell tales of patient toil, richly blessed with an abundant harvest. Full stores of luscious fruit stand invitingly in the cellar, tempting the appetite by its mellow hues; piles of vegetables, with their many colored skins, are here, destined at some future time to grace the table; and away up in the garret are heaps of brown nuts, which serve for evening feasts, at least for the younger members of the household.

There are, however, many duties for the faithful farmer to perform even in the winter months. To do "the chores" requires much time and patience. Stock, in order to be pleasurable as well as profitable, must be carefully tended. Their sleek, contented looks, if nothing more, will well repay a little extra labor. Then there is much planning to do—deciding what crops to raise, and how large proportions of each—determining what fertilizers, if any, to purchase—reviewing our last year's labors, in order to find what modes of culture, all things considered, will best reward us. Now is the time to repair farm tools, being careful to buy new ones if needed. The best seeds should also be selected for sowing and planting, and placed where they can readily be found. The "wood-yard" should now be filled with an abundant supply of fuel, the cutting and splitting of which will afford labor for many an hour. There are a thousand other things that can now be done, to facilitate the more pressing labors of the spring; but the *duties* of a farmer have been often dwelt upon—oftener, perchance, than the *pleasures*. Certainly no farmer lacks for *employment* at any season of the year; neither need he lack for *enjoyment*.

Farm life in winter has many pleasures—pleasures of a different cast from those of other seasons, but not less satisfying in their nature. The long winter evenings are a fruitful source of enjoyment, for they afford much time for the improvement of the *mind*. "ONWARD AND UPWARD" should be the farmer's motto, as well as that of other callings. If he adopts it he will surely have joys of a nature worth possessing. After the duties of the day are all performed, the farmer can seat himself before a comfortable fire, and devote his time to reading the history of other nations, travels in foreign countries, together with the news of the times. His mind, unburdened from all the cares of the day, can follow with a vivid, life-like interest, the pen of the traveller and historian, reveling among the scenes of other lands and days long past.

Friendly calls among our neighbors, for the purpose of interchanging opinions, and strengthening the social ties that bind us to our fellowmen, can now be made. Gossip does not of necessity form a part of such visits. A discussion of the events now transpiring in the world would be profitable; for farmers should aim to keep "posted up" on all matters of general interest, so as not to be "behind the times," in any valuable information.

Lectures and other literary treats are not so frequent in the country as in the city; but their very scarcity should tend to make them more highly valued by the farmer. The great book of nature is always open to his eyes, and he may read from its ever-changing pages, truths more sublime, more comforting to the soul, than learned disquisitions from lips of eloquence. Some leaves are filled with singing birds, and bursting buds, and babbling brooks, and balmy breezes; others with waving grain, and full-blown flowers, and summer fragrance; still others, with autumn's russet hues, and ripening fruits, and fading flowers, and falling leaves; and then come wintry winds, and sifting snows, and furious gales; all teaching us some useful lesson if we read them rightly.

Winter is an excellent time for earnest *thought*. The farmer can now lay up a store of information, which will make him feel that he is "something worth." And then when he goes from home to associate with different classes, he will feel that he has a firm foundation on which to rely. And when old age comes on, and swift-winged time blanches his hair, and causes his limbs to grow infirm, he can look back without regret on an upright life, and feel truly thankful that he has been blessed with so much abundance.

Much more might be said of farm pleasures in winter, as well as in other seasons, for they are numerous; but each farmer can best add to them from his own experience. S. J. WHITON.

Westford, Conn., Feb. 19, 1858.

THE PRODUCTIONS OF A SMALL FARM ON THE END OF CAPE COD.

It happened the other day, Mr. Editor, that I met with a gentleman from the adjoining town of Truro, who is engaged in farming, and, entering into conversation with him upon the subject of his avocation, I obtained from him the following items, comprising the products of his farm for the past season. Believing they might be of some interest to your reader, I noted them for the *Banner*. Here they are:

100 bushels	corn, worth	$100,00
150 "	beets, sold for 60 cents per bushel	90,00
80 "	potatoes, sold at 87½ cts. per bushel	70,00
50 "	turnips, sold at 60 cts. per bushel	30,00
10 "	beans, worth $2,25 per bushel	22 50
20 "	rye, worth $1,40 per bushel	28,00
200 "	carrots, worth 25 cts. per bushel	50,00
Squashes and pumpkins		20,00
Milk sold		125,00
1000 cabbages, sold at 6 cts. each		60,00
Eggs and fowls		75,00
Pigs		50,00
Amounting in the aggregate to		$720,50

The owner of this farm, Mr. Thomas F. Small, together with his son, a boy of some twelve or thirteen years of age, performed the entire labors of tillage, with the exception of the sum of one dollar and twenty-five cents, paid during the

season for extra help. The amount of land cultivated did not, I believe, exclusive of the part occupied by rye, exceed seven acres. This crop is, though a good one, not considered by him an uncommon one, nor was it produced by a system of forcing, or of excessive manuring, the present season, for the purpose of showing what could be done. It has, however, been constantly improving under the persevering industry and judicious cultivation of Mr. Small.

The above instance is not a solitary one in this quarter. Mr. Small's neighbor, Mr. Holden, has one adjoining, as also Mr. Samuel Knowles, and others in the vicinity, nearly or quite equal in productiveness, and enjoying the same facilities for a market there are in Provincetown.

We not unfrequently, as you know, Mr. Editor, see people, strangers here, smile at the bare mention of a farm on Cape Cod; but I submit, with these facts before us, whether the farms in Massachusetts, generally, or even in sections where farming is the chief occupation, will average in productiveness or profit a sum greater than that produced by this Cape Cod farm, situated here within a few miles of the very "jumping off place."

Add to this, the fact, that there are large tracts of waste, unimproved land—old fields, in the immediate vicinity of the above farm, that might, under good cultivation, in a short time be equally productive, and we perceive that farming may, even here, become an interest not to be despised. —*Provincetown Banner.*

For the New England Farmer.

LEGITIMATE COOKERY.

MR. EDITOR:—Having presented your readers, in my last article, a negative view on cookery—a series of *thou shalt nots*,—I am next to come to *affirmations—thou shalts*. In other words, I am to say what is *legitimate* cookery.

Indulge me, however, in two brief preliminaries. 1. The vastness of the subject, in itself and by its relations, is embarrassing and discouraging, and leads me to shrink from it, at first thought, and to refer my readers to my "Laws of Health." But as many have not seen it, I will endeavor to do something. 2. There will be a difficulty continually presenting itself, at nearly every step, which I wish to meet at the outset. Many will say, "O, I could not relish food prepared in this way; I have never been used to it." Now, I reply to this, by saying, once for all: "Remember Mr. Addison's rule,—*Find out what is best for you and adopt it, and custom or habit will soon render it agreeable.*"

The softening of the farinaceous grain—wheat, corn, rye, &c.—whether by mere soaking, or by boiling or steaming, is lawful and proper cookery. It is true, that in a perfect state, mankind might use them, as they do the fruits, without cooking; but our teeth, in most instances, are *fallen* ones.

Parching, or what is still better, *popping* our grains, especially corn and buckwheat, is legitimate.

Grinding grains, very finely—after being made clean—and by means of simple, pure, soft water, bringing them back to nearly the consistency of the original kernels, but in larger masses, as wafers, cakes, or loaves, is also legitimate cookery.

Under this head we may have cakes or loaves, but *thin* cakes are best, whether of wheat, oats, corn, rye, barley or buckwheat. Here are six kinds of grain, in the order of their value as bread. To which we may add, without violating what I think was the intention of Dr. Dunglison's rule, mixtures of these six articles, in various proportions, such as wheat and corn meal, rye and corn meal, wheat and oat meal, oat and corn meal, &c. Hence we may have, with no loss but that of a little time, as many as fifteen or twenty kinds of mixed bread, in addition to the above. The reader will, of course, understand that no additions, except in some instances a little water, are to be made to the meal; and nothing is to be bolted or sifted out, except the hulls or skins of the oats and buckwheat.

The preparation of the potato, the common and the sweet, by baking or boiling; the baking or boiling of turnips, beets, parsnips, chestnuts, pumpkins, squashes, &c., is legitimate cookery. So, also, is the thorough preparation by simple boiling, of rice, peas, beans, &c. In all this, however, there are no additions to be made; such as milk, salt, lard, butter, &c., for this would be a departure from true simplicity.

Nearly all these preparations, amounting to some forty or more, may be regarded as various forms of the *bread stuffs*—the staff of life.

Some of the fruits may be cooked, especially by baking. Such as the apple, pear and quince. Many varieties of the latter two are greatly improved by baking. The fruit juices are the milk of adult life. Fruits may be cooked in a simple way, or be eaten without cooking; and the juices may be expressed as into Pharaoh's cup, or eaten in the pulp. The last is doubtless to be preferred, for mastication's sake.

Meats, too, in order to be legitimately prepared, should be taken as soon as possible after life is extinct, and simply broiled, baked, or boiled, without additions.

Milk and eggs, if used, should be either taken, uncooked, or cooked legitimately. Milk is best fresh from the cow, and uncooked. If cooked at all, it should be simmered at a heat not exceeding 165° of Farenheit. So should the egg; its temperature, in cooking, should never exceed 165°. The reason is that the white or albuminous part coagulates at 165°, and is of no use in the body in that state; being only soluble by the mineral acids.

I do not say, Mr. Editor, that every departure from the strict letter of the law in regard to cookery, is equally a departure from what I have called legitimate cookery; for there are all degrees of errors, as in other things. Thus, to raise bread, though wrong, yet if done neatly, is but *slight* wrong. Again, to salt it is wrong, but the wrong is slight, not so great as when you both raise it and salt it. And even then the evil is not so great as when in addition to these departures you add milk and molasses and saleratus, and perhaps lard and alum.

But perhaps I have said enough, on a subject which, to many, will seem so uncongenial. I will, at least, close for the present. W. A. A.

Auburndale, May 20, 1858.

A HEREFORD HEIFER OWNED BY THE STATE, AND KEPT AT THE STATE FARM, WESTBORO', MASS.

CORA.

CORA is a fine looking animal, now three years old, and upon looking at her reminds one more of tender and juicy steaks than of brimming pails, pots of cream, and yellow butter. The Herefords have not yet gained a reputation as profitable milkers, and from their tendency to take on fat, and want of those points which are considered indispensable in good milch cows, it is improbable that they will ever be favorites as milkers.

Below, we give part of a report of the Judges on Hereford stock at the Massachusetts State Fair, held at Boston last fall.

The Herefords belong to the class of middle horns, according to the arrangement of varieties of the ox adopted by zoologists. Like their congeners, the Devons, the West Highlanders, and the cattle of Wales, they are considered indigenous to Britain—that is, they were found in certain districts of that kingdom at the earliest period to which history or tradition reaches. The breed appears to have undergone some changes within the last century, which changes are chiefly the result of systematic selection and breeding in reference to particular purposes, and not the admixture of other blood.

In 1824, Admiral Coffin, of the Royal Navy, presented to the Massachusetts Society for Promoting Agriculture, a Hereford bull and heifer. The cow never bred. The bull was kept for some time by the late Hon. Isaac C. Bates, of Northampton, and died in that vicinity at the age of nineteen or twenty years, leaving a progeny highly esteemed for general usefulness.

The predominant characteristic of the Herefords, is a tendency to fatten. In a paper by E. F. Wells, published in the London *Farmers' Magazine* for February, 1848, the following sensible remarks are made in regard to the properties of the Herefords:—"It is allowed on all hands, I believe, that the properties in which Herefords stand pre-eminent among the middle-sized breeds, are in the production of oxen and their superiority of flesh. On these points, there is little chance of their being excelled. It should, however, be borne in mind, that the best oxen are not produced from the largest cows, nor is a superior quality of flesh, such as is considered very soft to the touch, with thin skin. It is the union of these two qualities which often characterizes the short-horns; but the Hereford breeders should endeavor to maintain a higher standard of excellence—that for which the best of the breed have always been esteemed—a moderately thick, mellow hide, with a well apportioned combination of softness with elasticity. A sufficiency of hair is also desirable, and if accompanied with a disposition to curl moderately, it is more in esteem; but that which has a harsh and wiry feel is objectionable." It is for beef, chiefly, that they, as well as the "improved short-horns," and the Devons, are bred in England. They are more hardy than the short-horns, and their beef is of better quality, commanding a price in the English markets equal to any, except the Highland Scotch. As oxen, they are active, with weight and strength equal to the performance of any labor usually required. The breed ranks next to the short-horn in size. As to dairy qualities, they are as good as any cattle in which the fattening tendency is as highly developed. They give rich milk, and if it were desirable, the milking property might be developed to a greater degree, but as it would be at the sacrifice, more or less, of the fattening propensity, the breed would not probably be, on the whole, improved by this course. There is a place for the Herefords, as the breed is at present constituted, in this country, and so far as they have been fairly tried, they have given good satisfaction. Wherever beef and labor are the leading object for which cattle are kept in New England, and the northern section of the country generally, the Herefords are worthy of a thorough trial, inasmuch as the experiments heretofore made with them, indicate their adaptedness to this purpose.

FOWLS BREEDING IN AND IN.

It has been said, if you continue to raise from the same species, for a number of years together, your stock will degenerate, and will become useless.

I will now give my experience; and we will see, if by being particular in selecting the ancestors, the result is not the reverse of the above. My first experiment was at a hen-house, a mile from where I live; my stock of fowls then were the Black Mexican. I turned out six hens and a cock, from my first year's raising, and to all appearance they were as fine, trim made fowls as any I ever saw. The second year I found my chickens losing size; then I selected a tall spare-made cock, as being the finest chicken in the lot, and thought he would give them height; whilst the hens, which were low in stature, would give them size enough; but to my mortification the chickens became tall and slender, and in four years were not to be compared to the original stock. Now, at the same time I was trying an experiment where I live, in one of my lots, on the Earl of Derby fowls, and to my surprise they improved in form and some in weight.

I selected four pullets of good size and large bone; the cock I selected from chickens hatched in March; he was broad across the breast, back short and round, wings long and strong, feet small, legs large and straight, and in symmetry unsurpassed; then I gave him the run, and raised from him two years, though I turned out a cock the first year; and when I saw the chickens, the most of them wanting height, I selected the hens, not the cock, with long legs; and in that way I can keep a stock pure for any length of time without degenerating. My stock of Derbys are finer to-day than they were when I got them.

Late chickens should never be turned out to raise from, unless you intend to cross them, for that will, of itself, make your chickens small. March chickens are preferred by me to any other month.

You should never keep many chickens crowded in one hen-house, especially during August and September, for it will be sure to give them the distemper. The distemper is known by the chickens discharging a watery mucus from the nostrils, and the head looks pale, and the chicken has no appetite.—*Southern Planter.*

For the New England Farmer.

BARBARITY ON HORSES—PRICKING, DOCKING, &c.

DEAR SIR:—In your paper of May 15th, I read an article in which the writer denounces the popular barbarisms, *docking* and *nicking*, and asks, "Why this passion for chopping off tails?"

I endorse the sentiments of "P.," and agree with him in the opinion that "*decency* forbids such mutilation." The passion for nicking and docking probably originated with some vain and officious individual, who had an impression that he could make some improvements on nature's handiwork; in process of time the barbarous folly became quite fashionable, and now it is no uncommon thing to see, in some of our city stables, as many as five, sometimes a dozen, horses with their tails in the pullies, for the purpose of giving them the latest style of curve or elevation, to suit the morbid fancy of the horse-dealer. If purchasers did but know, how very painful such operations are to the horse, I feel assured they would set their faces against them at once. In the course of my practice I have always refused to perform such cruel and unnecessary operations, and if my veterinary brethren would adopt a similar course, and at the same time try to convince the community that such operations are entirely unnecessary, the barbarism would soon cease.

These unnecessary operations were once as popular in England, as they are here at the present period, but the English people have at last realized the enormity of torturing uncomplaining animals in this barbarous way, and I feel assured that American horsemen have no desire to be considered less humane than those of the mother country, hence we may reasonably expect that the time is not far distant, when such cruel operations will cease.

A very philanthropic man, and eminent surgeon, (Mr. Blain,) in his work on the horse, thus alludes to the popular follies of nicking and docking:—"We are happy to state that this filthy and unnecessary operation is now discarded. It never consisted of more than the cutting off a portion of the tail with brute force, and the cruel application afterwards of a hot iron to the arteries of the tail.

Nicking.—We should be grateful that this barbarous and dangerous process is no longer numbered among the necessary operations. It is so beset with accidents which no skill or prudence can prevent, that no one ought to mutilate a horse by nicking."

Boston, May 19, 1858. G. H. DADD, V. S.

EAGLE MOWER AND REAPER.

The season of Haymaking will soon be upon the farmer. Is he prepared for it? We have just been looking at the new "Eagle Mower and Reaper," and thought many of our friends who cut hay for ten head of cattle and upward, ought to look at it too. It is certainly a model of good work,—is light, yet strong, executes rapidly, but with little draft, travels on its own wheels from field to field,—has no gearing to jar its motions, and can be stopt and started in the grass without any backing. This is the machine that took the *one thousand* dollar premium offered by the Massachusetts Society in 1856. It was tried with other machines a week or two since in a field of "old fog," or old grass, and went through it, with great facility and ease, while other machines tried with it all clogged more or less,—so a friend who witnessed the operation informed us. We have not yet seen it in motion, and only desire now to call the attention of our friends to it before the hay season comes on.

FRUIT—ITS BENEFITS.

After some months of reflection, I am still in favor of "*strawberries and cream.*" I respect Dr. FRANKLIN,—I suppose he was a good man—not pious, but patriotic. Patriotism is only a segment of piety, but it is about all the good there is in our "*great men.*" FRANKLIN had something to do with *lightning*. I never exactly found out what, but his relationship in that quarter has evidently made women and children, and even men, contemplate him with awe. A sort of philosophical wizard, he is the right kind of man to "head off" poor scribblers. Accordingly a *Rural* correspondent arrays the doctor against me. He quotes him, not exactly against my friends the Bartletts and Antwerps, nor yet against eating in general, but against talking of our food, and smacking our lips with too evident relish. Now, I confess to a hearty dislike of sensualism—in fact I was pleased with what the doctor said. I believe in raising our thoughts above the things of earth, but I submit it to the philosophers of this generation, whether our thoughts and associations would not savor more of Heaven while partaking of Newton Pippins, Seckels and Hovey's Seedlings, than when munching crab-apples and Rohan potatoes.

I believe no man can deliberately set about getting up a good assortment of fruit, without being a better man. I will guarantee that an inventory of *scoundrels* will include but few zealous fruit-growers. A man seldom plants a tree without thinking of his friends, and the good cheer he can give them. He means to send a basket of pears to the minister, and give the widow lady over the way all the peaches she can use; he aint the kind of man that is unwilling to move till he can get a warranty that all the benefit shall accrue to himself. He goes for posterity and patriotism.

How much the general use of fruit, as every-day diet, will do to bring about the millennium, I cannot exactly tell; but I do know that there is no use in our trying to be wiser than GOD. Break one link in the divine economy, and the universe is enfeebled in all its parts; the divine arrangement evidently is that fruit shall form a large part of our diet. "Of every tree of the garden thou mayest freely eat," &c., implies a variety of fruit and the use of it. The exquisite flavor of our best varieties is nothing more nor less than their adaptation to our natures and necessities. Fruit is suited to our palate, as the shell is suited to the oyster, or the air to the lungs. Men may like *tobacco*, but it is only in their fallen state, in the very lowest stages of manhood, when

they are about fit to be transposed into monkeys —the *infant* never likes it—the unsophisticated and unperverted hate it. Not so with fruit. Man in his normal state likes it; his relish is not *acquired*—GOD gave it to him. Physicians have given repeated and emphatic testimony as well to the nutritive qualities of fruit as to its eminently healthful character. Men who deemed pills essential to life have found in multitudes of cases a pleasant substitute in fruit. Its free use would be preventive of indigestion, headache, dyspepsia, (my readers will find a complete list of the complaints in the patent advertisements,) and I take it for granted that when these diseases are cured, melancholy and suicides will cease; quarrels and wars be done away with; and peace on earth and good will to men prevail.—*Rural New-Yorker.*

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

A common school education is deemed of great importance, and the branches here taught should be of practical utility. Among these no one will rank higher than a knowledge of the elementary principles of agriculture. If these are taught in our common schools, impressions will be made on the minds of youth highly salutary to their future usefulness and happiness. They will be likely to engage in agricultural pursuits, and deem the employment of the husbandman the most honorble and useful of all; and when this is the case, the earth will bud and blossom as the rose, and under the smile of a merciful Providence peace and plenty will be the common lot of man.

Considerable efforts are being made at the present day to elevate the standard of common school education. But it is unpopular to say much on the importance of instructing youth in the elementary principles of agriculture. Books on almost all other branches are introduced into our schools and highly extolled. But an elementary book on the subject of agriculture is hardly named, or if named, is said to be out of place; and a distaste is impressed on the minds of youth against rural and agricultural pursuits. This proves highly detrimental to their future usefulness and happiness. How many young men and young women scorn the idea of living a farmer's life? With them, some profession or some splendid residence in a city is preferred to a rural dwelling-place in the country, where the mental and physical powers may be cultivated, and where health and happiness may be enjoyed so far as it is for the good of man in this world. Will not the true friends of a good practical common school education discuss this subject through the medium of the press, and give all classes of people to understand the importance of introducing elementary books of agriculture into our common schools? JOHN WILCOX.

Newport, N. H., 1858.

PEPPER.—Pepper is an almost universal condiment. Black pepper irritates and inflames the coatings of the stomach, red pepper does not; it excites but does not irritate, consequently it should be used instead of black pepper. It was known to the Romans, and has been in use in the East Indies from time immemorial, as it corrects that flatulence which attends the large use of vegetable food. Persons in health do not need any pepper in their food. But to those of weak and languid stomach, it is manifold more healthful to use cayenne pepper at meals than any form of wine, brandy or beer that can be named, because it stimulates without the reaction of sleepiness or debility.—*Hall's Journal of Health.*

For the New England Farmer.

TOWN AND COUNTRY.

MR. EDITOR:—I believe it is Cowper who says, "God made the country, and man made the town." This does not appear to me to be strictly true; or, if it be true, it is to be understood with certain limitations; for, in both places, we are alike surrounded by the works of God and man. In the country, we see more of nature in its simplicity, adaptation and loveliness, less perverted by the artifices of man; whereas, in the city, the eye is limited to some narrow spot by streets and walls of massive brick and stone. Men and their arts appear in greater number and force in cities; but the hand of rural art and labor renders the country the most picturesque and charming to the eye of the beholder. In both situations, men are toiling for gain and subsistence, but with this difference; in the city, they depend upon shrewd bargains or upon their mechanical skill; but, in the country, upon the direct returns of their labor in the products of the soil. As the inhabitants of the country deal more directly with their Creator, there is more constancy and security in their gains, though they seldom accumulate great fortunes.

It is often asked whether life in the country or in the city is, on the whole, most favorable to the formation of the Christian character; the pursuit of true wisdom, virtue and holiness? It is not my purpose to answer this question directly. It is sufficient to say, that in both situations, there is room for moral and intellectual improvement, where there is a disposition. He who lives among the crowds of the city, frequently ascribes to their example his own vices; and he who lives in the retirement of the country, often refers his rudeness to want of better opportunities. In both situations, we are required to do an honest man's earnest work, and to secure our own happiness by a virtuous course of conduct.

It appears to me, that, whether we live in the country or in the city, we should remember we are progressive beings, and endeavor to make some progress, not only in our characters, but in our business pursuits. There are some people, with whom a whole century produces no visible change for the better. They make no improvements in their style of doing business, or in any thing else. They seem to be the very type of conservatism—immovable in the midst of incessant change. If in the country, they remain on the old homestead, and retain all their acres, from generation to generation. To sell one of their hundred acres, would be a downright desecration, though they do not properly cultivate a hundredth part. If they live in the city, their minds seem to have been stereotyped with all the old notions which prevailed before the flood.

JOHN GOLDSBURY.

For the New England Farmer.

PIPES FOR CONDUCTING WATER.

MR. EDITOR:—I cheerfully answer the inquiry of Mr. CONSTANTINE, in your paper of the 16th inst., in regard to the "best kind of pipe for bringing water," by stating my own experience.

Nearly forty years ago, in connection with a neighbor, I constructed an aqueduct of drawn lead pipe of three-fourth inch calibre, to supply ourselves with spring water. The fountain was on my own land, and not over forty rods distant from our houses. We used it at our houses and barns. This was the first drawn lead aqueduct used in this town or vicinity, so far as I know; but a sheet lead pipe soldered together, was constructed by a mechanic a year or two previous, but it was of short duration. Our aqueduct lasted some fifteen years, when it failed by corrosion, and was replaced by new pipe. The last pipe is, so far as I know, still in use, and I attribute its preservation from corrosion to the precaution taken to cover it, say a foot deep, with clay.

My next was about thirty years ago, in constructing a pipe of two inch calibre, on a new locality to supply some twenty or twenty-five customers. This pipe was made very heavy, as it was particularly desirable, for special reasons, that it should not often need repairs. I was much surprised, however, to find in the course of three or four years, that this new lead aqueduct began to need repairs, and after being at considerable trouble with it, for a time, I was led to make a thorough examination, when I found nearly every rod of my pipe more or less corroded, and I was obliged to substitute some other material. I decided upon wood, and this last is in good order now, after having been in the ground for twenty years. I would state that the ground through which this pipe ran, is, or was, a wet meadow—but has been materially modified by draining and filling—and I would remark that my first aqueduct ran for a considerable distance through similar ground, and in *that part* it was that the corrosion took place, while that part which ran through a sandy soil was not affected.

My third enterprise in the aqueduct line, was on a more extended scale, and in giving an account of my experience, I may possibly be more minute than would be desirable. But it being probably the most extended individual enterprise of the kind in New England, and one in which I took especial pains to introduce all the conveniences that I could find far and near; and it being an enterprise which has been crowned with complete success as to its indispensable utility to a large population, its permanency, and its value as an investment, an account of it may perhaps be worth the space it will occupy.

The town of Springfield, where I have lived for near half a century, had always been poorly supplied with water. There were a few poorly constructed private aqueducts, but the population depended mainly upon wells, which afforded indifferent water for drinking, and almost impracticable for washing. I sought what I deemed a good source for water, gushing from the bowels of the sandy plain above us, and of the purest and softest quality, and I secured by purchase the spring and the right of way to a public road at once, and at a very moderate charge. I then invited attention of several prominent citizens to the subject, who I knew had quite as much personal interest in the introduction into our village of pure water, as myself, and a good deal more money to spare to invest in it, but no one seemed to have confidence in its success, and each declined joining in the undertaking. Many promised to be customers, if the water was brought to them, and the Western Railroad station being scantily supplied, Hon. Edmund Dwight, then President of the corporation, offered to make a contract for ten years, at a very moderate charge. After reflecting on the question of engaging single-handed in such an enterprise, I determined to go on; my reasoning was, that if it proved useful, and not extravagantly expensive, the citizens would not allow me to suffer. This was in the spring of 1843.

Being in the timber business, and having on hand a considerable amount of timber suitable for pipes, and conveniences for manufacturing, I procured a set of tools for manufacturing, of different calibre, and employed an experienced man to bore and fit them. While the work was going on, I visited various places where aqueducts were established, to acquire information as to various matters of convenience and expediency. Among other places, I visited Syracuse, in the State of New York, where I learned that a company was introducing water into that city, much on the plan that I was pursuing. I learned, also, that the State of New York had used wooden pipes to conduct their salt water from their saline wells to the various points where it was used for the manufacture of salt. These works had been in use many years, and I presumed that long experience had suggested improvements in the manufacture and laying of the pipes, not generally known. Nor was I mistaken; and my journey there was important in its results. I found, at Syracuse, augers for boring, and tools for fitting the logs together, so perfect, that I bought a set at considerable expense, and laid my own aside. I also learned the mode of charring the insides of the pipes, a most important operation, as it has the effect to prevent the water passing through, from being affected with the taste of the timber. This operation is exceedingly simple, like many other valuable improvements and inventions.

I also visited your good city of Boston. You will see by the date that it was some years before your magnificent Cochituate was commenced, but having been a Boston boy myself, forty years before, I remembered the Jamaica Pond aqueduct, and that it was constructed with logs. At Boston I found several conveniences, not in use elsewhere. But the great idea—and worth more than all the rest—that I received there, was to *lay my logs deep*. For this idea I was indebted to Thomas A. Dexter, Esq., who was principal director of the old Boston Water Works.

He remarked to me, that wood was a very good material for conducting water, and if laid deep enough, it would out-last iron. He repeated with emphasis, *deep enough*, to impress the importance of it on my mind, and I have taken pleasure in calling on him at his office repeatedly, to speak of my success, and to thank him for his most valuable suggestion. I have lived to become convinced that Mr. Dexter's opinion,

that timber thus laid will out-last iron, may be safely regarded. It will occur to any person of practical experience, that a post set say three feet deep, will rot off near the surface, while the lower part is comparatively sound. Mr. Dexter has samples of my aqueduct which have laid from eight to thirteen or fourteen years, and I doubt not he will show them to whoever may feel interested to see them, and I will send you samples taken off the logs quite recently that will speak for themselves.

I followed the injunctions of Mr. Dexter strictly, and will now say that in eighteen miles length of wooden pipe, which is now laid and used, I have reason to believe that at this moment, nine-tenths of it is as sound as the day it was laid, after having been used from ten to fourteen years. I am in the habit of procuring chips from the logs whenever there is occasion to dig down to them for inserting a new leading pipe or for repairs, and keep them as evidences of the condition of the logs. I have samples taken off within three days, from logs laid in the fall of 1843, which are as sound as when first bored and laid. My depth in sandy, porous ground is six feet, and in clayey ground, four feet, but in swampy or meadow ground, scarcely three feet. The idea is to put the timber below the changes of temperature. There is another advantage in laying deep, and not a slight one. It keeps the water about as cool as when it is in the spring, and obviates the objection to aqueduct water, that it is insipid for drink.

I will now give an example in proof of the advantages of deep laying. I furnished pipes for a company in a neighboring town, of about two miles in length, and they chose to dig the ditch, and notwithstanding my remonstrances, they insisted on laying them between three and four feet deep in sandy ground. The consequence was, that the principal part of the line decayed within seven years, and it is now totally useless. The logs were the same quality as my own, which, laid at the same time, are sound. This, I think, settles the question of advantage of *depth* beyond dispute.

I soon found that my enterprise was popular, especially with the women, as it furnished to them in their houses, at a moderate charge, an abundant supply of pure spring water, and more was called for than my first spring would afford. I, therefore, added by subsequent purchases, five other springs, which altogether afford an abundant supply of water for families, for steam engines, and for the city reservoirs in case of fires. These last are supplied in such abundance, that there has been no cistern in which the water has been exhausted, when the fixtures for letting on the water are in order, and immense amounts of property have been preserved from destruction, by means of this aqueduct. During the first five years, and while I was sole owner, I had laid more than eleven miles of wooden main pipe, of a calibre from seven inches down to one and one-half inches, and service pipes of lead, measuring perhaps as much more; these last invariably at the expense of the water takers, and I supplied customers as follows:

Families	479	Livery Stables	8
Stores and Shops	84	Churches	1
Stables and Barns	37	Steam Engines	5
Hotels	6	Barbers' Shops and Bathing Rooms	5
Printing Offices	2	Foundries	3
Machine Shops	3	Offices	6
Banks	3	Fire Reservoirs	4
Boarding-Houses	17		
Railroad Depots and Engine Houses	3		666
Bakers	2	And also for watering streets.	

I was verbally threatened by various individuals, with prosecutions, at various stages of the progress of my work. The great mass of the people, however, having become satisfied of the indispensable importance of the aqueduct, lent their countenance, and cheered me on.

I had, however, invested more than was prudent in a person of my moderate means, and in order that the full benefits might be enjoyed by all, I proposed to put the property into a joint stock corporation, and gentlemen came forward and subscribed for shares, and an act was granted by the legislature of 1848. All sorts of difficulties were thrown in my way, in procuring a legislative charter, but as the usual powers only which had been accorded to other parties were asked, an act finally passed, authorizing a capital of $25,000, with liberty to increase as needed, to $50,000. Extensions have been since made from time to time, until the length of main pipe exceeds 18 miles, and the capital has been increased to $35,600, and the number of customers has steadily increased, and is now increasing. I will now say, without the fear of contradiction, that this work, commenced and carried forward to successful results, is of as much importance to the city of Springfield, and as indispensable at this moment to them, as the Croton is to New York, or the Cochituate to Boston, and as an investment, is as productive as any stock in this place. The net earnings from the first year of its operation to the present time, have averaged ten per cent., and is paid in semi-annual dividends of five per cent., and as the expenses are lessening, and the rents increasing, the stockholders may look forward to a twelve per cent. dividend in a short time.

I will not extend this account, by stating the difficulties which were thrown in the way of procuring a Legislative act of incorporation. It is sufficient to say, that envy, and personal and political grudges moved it, and I doubt not the most active and virulent have long since repented of their course. At any rate, several of the most prominent depend on the water for themselves and their tenants, and some of them are now stockholders in the property.

I took especial care throughout the construction of this work, to avoid encroachments on individual rights, and the rights of the public. First, by the purchase of the springs and the right of way to a public street; and second, by procuring the consent of the town authorities, for laying my pipes in the streets, which was duly recorded, and when from any cause an individual was injured by my operations, I made satisfaction without litigation. There were individuals who claimed to be lawyers, who disputed the power of the Selectmen or any other authority, even the Legislature, to grant the right to lay pipes in the streets without the consent of all abuttors. I have before me a notice in the handwriting of a prominent individual, which I will give as a sample, which was regularly served by a constable.

"To CHARLES STEARNS, Esq.:—Sir—This is to notify you, that I intend to dispute your right to lay an aqueduct in Howard Street or Water Street, in the town of Springfield, or to continue the one already laid in Howard Street, in front or on either side of the homestead I now own and occupy, on the corner of said streets, also, in Bridge Street, in said town, in front of the Edson house, so called."

A true copy, attest, (Signed,) ——— ———.
WM. HATFIELD, Constable of Springfield.

I have deviated somewhat from the simple question of Mr. Constantine, as to "the best kind of pipe for bringing water," hoping that my experience may be beneficial to others, if not to himself. I will remark, however, that as to the poisonous effects of lead pipe, I used constantly, for twenty years at least, water drawn through a lead pipe, and neither my family nor myself experienced any bad effects, nor have I ever known a well authenticated instance of the injurious effects of such pipe, but I have heard of such instances, and it is probable that they have existed. *All* my leading pipe, conducting the water from the mains to houses and other places where the water is used, are of lead. I have lately received a printed statement of an aqueduct constructed in Pittsfield, Berkshire Co., in this State, within a few years. The main pipe of this aqueduct is constructed of Ball's patent indistructible cement pipe, an article with which I am not acquainted. But I notice, that the expense of this aqueduct is fully treble that of timber, and if there were never any expenses for repairs upon it, the interest of the money on the difference in the cost would keep the Springfield wood aqueduct in repair for all time to come, and divide a large surplus for the owners.

The timber aqueduct is manufactured here by Mr. Ezekiel Keith, who will answer any questions as to price, &c. CHARLES STEARNS.

Springfield, Mass., May, 1858.

For the New England Farmer.

DEPTH OF PLOWING.

MR. EDITOR:—I have seen numerous speculations of late, as to the proper depth of plowing to be had in our fields, and know of no question of more practical utility. Some say four, others eight and others twelve inches, according to the condition of the soil. Much will depend, undoubtedly upon how it has heretofore been turned, it being thought judicious to deepen one or two inches, at each succeeding breaking up—until at least a depth of twelve inches of loosened soil shall be attained. We know that most plants, even those that grow chiefly on the surface, (the onion, for instance,) extend their fibres to the depth of a foot or more, therefore it is reasonable to suppose that they will be benefitted by the soil being stirred to this depth.

Our best cultivators, when they first turn up their grass lands use a strong team, (two pairs of oxen, at least,) and let their plow sink as far as it will—say from six to twelve inches. And they generally realize the best products, where the culture is deepest, provided there has been applied a sufficiency of manure. So long and so hard have our fields been pressed, that no man may expect a crop, without a due application of the needful. It is said that corn will do best, where the culture is shallow; and that it is more than useless, to stir the soil more than six inches deep for this crop. Such has not been my observation. I know of farms, where from forty to eighty bushels of corn are now grown to the acre, on which thirty years ago, thirty-five bushels would have been considered a good crop; and this difference is attributed to the deepening of the culture.

Notwithstanding the doubts of some and the slurs of others, I am of the opinion that benefit will accrue from deepening the culture of the soil, and that double the crop now attained, can be had, by a judicious application of this process.

J. W. PROCTOR.

South Danvers, June 2, 1858.

For the New England Farmer.

THE FARMING ART.

The multitude of separate, independent arts combined in agriculture, horticulture and floriculture, can scarcely be estimated. The culture of each kind of grain and fruit must have been a separate discovery, and given rise to a new art. The Indian corn was originally a wild grass or plant, and in its wild state afforded only a small quantity of seed, spread over immense plains in thin, scattering beds, and collected with difficulty. The art of raising this plant, has become so perfected as to yield a hundred barrels where only one could once have been collected. The grain, too, is more improved in quality than in quantity. Wheat, rye, oats, barley, buckwheat, rice, beans, peas, were all separately discovered to be edible, civilized, and finally produced in the shape we now see them. These were all wild grasses and vines, collected by various observing individuals, submitted to the trial of culture, and perfected by the ingenious hand of the husbandman.

Instead of the fine, full, large grain of wheat we now see, the kernel was small, withered and tasteless. The various wild grains only yielded seeds like other grasses, and afforded but a scanty pittance to the gleaner. Apples, pears, peaches, plums, cherries, currants, quinces, oranges, lemons, and many more fruits, all grew wild in woods, plains and swamps, and were taken from these places, planted in mellow soil, enriched, hoed and nurtured from year to year until they grew to the size and flavor in which they now appear. In size they resembled walnuts, chestnuts, huckleberries, swamp-cheeses and wild cherries. Beets, carrots, parsnips, turnips and cabbages, may all be cited as instances of brilliant discoveries, and their culture as new arts. The grape and the cranberry are probably the least changed and improved of any kinds of fruits, yet what a change is effected even in these by habitual, attentive culture.

The husbandman, unconscious of the multitude of arts combined in his occupation, grows up among them as if all were the product of nature, and the inspiration of the seasons, and not the work of patient attention and careful study. The animals which he uses were as wild as his plants and trees. The horse, the ox, the cow, the sheep, the hog, the geese, turkeys, hens and pigeons were all as profitless and as much beyond his reach as the lion, the tiger, the eagle and the partridge. The domestication of all these; the manufacture of butter and cheese; the manage-

ment of wheel carriages; the slaughter and preservation of animal food; and the measurement of his land by paces and rods comprise an imperfect list of the arts in the profession of the farmer or of general agriculture.

The culture of flowers and shrubs evinces no less of art than the astonishing development of grasses, grains and fruit trees. In value, size and beauty they have increased many fold. The poppy, the rhubarb, the peppermint, the caraway, the rose-bush, the pepper, the mustard, the sage, the lavender, the saffron, the lobelia, the sunflower, the pink, the violet and the honeysuckle, each displays the ingenuity and refinement of the agricultural art. Their old kindred in the wilderness and the plain would seem to have lost all relationship, and to live in comparative worthlessness. RURAL ART.

April, 1858.

For the New England Farmer.

THE PROMOTION OF AGRICULTURE.

[An Extract from a paper read before a Farmer's Club in ——, Jan. 21.]

* * * * To see the condition of our town is easy; to prescribe a remedy may be more difficult. But however hazardous it may be to emulate him, who, when asked, "Can you play on the flute?" replied, "No, but I can tell you how to make a little village become a great city;" yet every man owes it to the town he lives in, to make the best suggestions that he can to promote the public good.

A few days since, an eminent citizen caused his name to be forever held in grateful remembrance, by a bequest of $15,000 to our town; the income of which is to be appropriated to moral and intellectual purposes. This noble gift has insured the prosperity of the causes to which it was bequeathed. Now, let some other rich man, or some number of rich men, or even the town itself, donate a fund, the income of which shall be appropriated to the promotion of agriculture in this town. One-fourth part of the capital which our citizens have invested in bank stocks *out of town*, viz., $30,000, would give an annual income of $1800, to be divided in premiums among our farmers, every year through all future time. Let this be done, and this town would blossom as a garden. As a mere money-making stroke of policy, I challenge the suggestion of a better. Ten of our greatest land-holders could *to-night* make money by donating such a fund to the town. Real estate would forthwith rise in value to the extent of $200,000. $1800 hard, golden dollars, counted out and distributed among our farmers at an annual cattle show day, would have a marvellous effect; the attractions of the West would pale before their glittering light. In ten years, this town would become as near a city as the business of agriculture would allow. Then would it be, in the words of the poet:

> "A goodly sight to see
> What Heaven hath done for this delicious land,
> What fruits of fragrance blush on every tree,
> What goodly prospects o'er the hills expand."

J. R. E.

☞ *Hall's Hand Power Stump Machine*, recently illustrated in the *Farmer*, is for sale at *Nourse & Co.'s*, 13 Commercial Street, Boston.

PASTURE LANDS.

In the management of pasture lands, it is an excellent plan, where the nature of the ground favors the operation, to free the surface of bushes, stones, stumps, &c., and then plow it carefully once every six or eight years, harrow thoroughly, and sow on the seeds of such grasses as are found to be best adapted to the locality, and the most valuable as a summer food for stock.

Herd's grass (timothy) white and red clover, red and brown top, make an excellent stocking for light pastures. The recuperative power of pasture lands is such as to render the application of manures of less consequence than on other lands; yet it will be found highly beneficial to apply, occasionally, a light dressing of plaster, lime, or what is better still, wood ashes—all of which have a tendency to promote the development of vegetation in the early spring, as well as to sustain it in seasons of severe and protracted drought. These appliances tend also to bring into action the energies of the inert humus contained in the soil, and to render the silicates soluble, and consequently in a proper condition to be taken up by the roots of plants.

From the inert humus, and certain other substances of a mineral character, the soil of our pastures derives the power of recuperation, or self-replenishment, which it is supposed to possess. But it is well enough to remark, that, apart from the phenomena of vegetable growth and decay, in no such power is recognized nature. If we annually remove the produce of a field or pasture, without making any returns in the form of manure, we shall necessarily pretty rapidly impoverish the soil.

In fallowing—that is, in plowing and harrowing land without sowing it—no vegetation is allowed to mature; all that the vegetable powers of the soil produce, is immediately returned to it, and as most plants derive a portion of their food from the atmosphere, the air, by this process, is made to enrich the earth. The soil itself also absorbs from the same source a very considerable amount of fertilizing matters in the shape of gaseous products, and when supplied with materials capable of absorbing and fixing the æriform principles which are perpetually present—and in large quantities, throughout this wide-spread and inexhaustible field of fertility—the accession of fecundating matter will be very large, and secure the most favorable results, both to the soil and the succeeding crops. This is, perhaps, one of the most economical and effectual methods of replenishment it is possible to adopt.

But we must not suffer ourselves to be illuded by the glitter of hypothetical conclusions; we must attribute results to their legitimate causes, and trace each one, so far as it is practicable for

as to do, to its real and proper source. The demand upon the energies of the soil always exceeds the supplies derived from the air, and hence we see that there is no such thing as a recuperative power, or principle, independent of vegetable life.

The spires and blades of the grasses, and the stalks and foliage of other plants, frequently decay and fall upon the ground, their places being supplied by new formations, often emanating from the same, or nearly the same points. The same takes place among the roots. When a fibre perishes, it is resolved into humus, and supplies food for the new organ which nature prepares to occupy its place. This alternation of decay and reproduction, is going on continually throughout the wide range of nature, and its results are obvious at every turn.

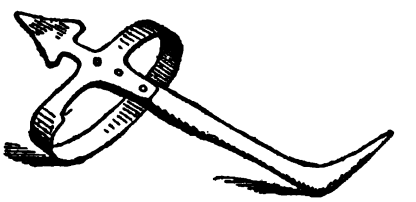
The pastures to which we refer, must be, of course, such as are capable of being worked; such as lie near villages, or wherever land is high. The rough, rocky, mountain pastures, where the land is comparatively cheap, cannot be economically plowed. If they are absolutely needed, being worth more for pasture than to allow them to grow up to wood, about all that can be done for them is to keep the bushes down, and sow on them occasionally plaster, lime, or ashes; and the economy of this will depend entirely upon the price at which these articles can be obtained, including the cost of transportation.

MANUFACTURE OF CARPETS.

The New York *Journal of Commerce* thus describes the process of manufacturing Brussels Tapestry and Velvet carpets by the New England Worsted Company:

The process of making these carpets is one of the most interesting in the whole range of manufacturing. The goods are not printed in the piece, but the threads are colored by the printing process before the fabric is woven. The operation is as follows: The yarn in a white state is reeled upon a large drum, so that the threads lie side by side, the circumference of the drum being the length of the figure, or of the yarn necessary to make it, in an elongated state, while enough yarn is placed upon it to make eight threads, each running the whole length of a piece of carpet. A plan for the figure is then drawn, and gaged with mathematical accuracy, showing the exact space of each color to be printed on each separate thread of warp. Holding this plan before her, the girl in charge, by the assistance of a boy, rolls a box of color under the drum, making a line across the drum; if a wider space of the same color is needed this box rolls several times, the drum meantime slowly revolving. The next color is then added, until the whole surface of the yarn upon the drum is striped with these lines. The yarn is then removed, and makes eight threads, only one of which can be used in a single piece of carpet; they are, in fact, eight first threads for as many pieces of carpet. Yarn for the next thread is then wound on the drum, and printed according to its plan, and this is continued until enough is done for the whole width of carpet, the result being enough for eight pieces of carpet just alike. The separate threads numbered are then brought together in proper order side by side, and placed in the loom, the filling, as all our readers know, being of hard twisted uncolored thread which only shows on the back of the carpet. The carpet is then woven, without farther regard to style, the beautiful figures resulting being produced entirely by the previous printing, the mathematical accuracy of which is truly astonishing. The most exquisite shadings, bouquets, and figures of every imaginable design or colorings, may thus be produced with all the accuracy of needlework upon prepared canvas, and at a price which is wonderfully cheap when the brilliancy of effect is considered. The loop on the surface of the Brussels is made by throwing the thread over a polished wire, which is withdrawn as the work progresses; and the velvet surface is made by cutting the loop after weaving.

WEEDER, TROWEL AND DIBBLE, COMBINED.



The cotton mills and carpet looms have not had all the benefit of active and ingenious minds, as will be evident to those who stroll through the extensive agricultural warehouses of this city. There *is* "something new under the sun" every day. The exercise of many educated and well disciplined minds is now turned, more than ever, we think, to the interests of the soil. A chaste, instructive and vigorous agricultural literature now charms and adorns the labors of rural life, and is throwing around them influences which will not only keep more of our young men and maidens on the farm, but it is winning back many who have strayed and "tasted a thousand ills unfelt at home."

We have not used the *Weeder, Trowel and Dibble combined*, and cannot, therefore, speak from any practical experiences. It is a device of Mr. VON UNWERTH, who says it is "a most valuable combination of three very useful garden tools.

The operation is so simple as hardly to require an explanation. The broad side of the weeder may be used to clear a larger space of weeds, and also to loosen the soil. The narrow oval sides of the weeder are intended to loosen the earth lightly around the young and tender plants without injuring them.

The use of the trowel and dibble in setting out plants, and doing various kinds of garden work is obvious to all.

By combining the three in one the purchaser has an instrument costing less than three separate implements and also much more convenient."

For sale by PARKER, WHITE & GANNETT, Blackstone Street, Boston.

For the New England Farmer.

CULTURE OF THE PEACH.

MR. EDITOR:—As it may not be uninteresting to some of your readers, I have herein set forth an account of my experience in the culture of the peach. In the year 1849, I gathered some peach-stones of the wildest, and I might say, the poorest I could find. I placed them in a box, first a layer of earth, then a layer of peach-stones, until I filled the box; I think there might have been three layers of peach-stones. They were left out of doors until the frost had acted upon them, and about the first of January they were placed in the cellar. Early in the spring they were removed to a warm situation, where the sun could reach them most of the day, and by the time I could prepare my ground, they had mostly started; *some* grown from six to ten inches high. By removing one end of the box they were easily transplanted into rows where they grew to a good size for budding; which was done early in September. Of five or six hundred trees, only one hundred and seventy took well; these were set out in the spring of 1850, and in 1851 I planted more in the same manner, with similar result, until I obtained four hundred and fifty good trees budded with twenty-three varieties: there remained over one thousand inferior trees, on many of which the buds did not take; these were thrown away. The four hundred and fifty trees were set out in rows fourteen feet apart each way. When one year old from the bud, the top was cut in close to the main stock; apple trees were set every twenty-eight feet each way. The ground occupied is less than three acres. I have continued to work the land, planting corn, potatoes, beans, squashes, &c., commencing with three rows between the trees, each way, and as the trees grew, two rows, then one, always making a tree come in a hill, plowing either way.

Of peaches, the result has been, that in 1853 I had a few, I forget how many, sold to the amount of fifty dollars; in 1854, had one hundred and fifty bushels, sold to the amount of two hundred and fifty dollars; in 1855 I did not have one peck; in 1856, had about eighty bushels, sold to the amount of three hundred and fifty dollars; in 1857 had one hundred and thirty-five bushels, sold to the amount of four hundred and fifty-four dollars. The trees are mostly in a healthy condition, in full blossom, with a prospect of a much larger crop than ever before. My situation is sheltered from the bleak winds; there is a large hill on the north-east and also on the north-west, and I think it must be owing to my location that I have had quite a crop of peaches, when there were hardly any in this country, as was the case in 1856. As respects the varieties, there is a marked difference in their hardiness, also the same kinds will not always be as good, owing, I think, mostly to the season. I have thirty rather small-sized trees of the Malta, which in 1856 produced twenty bushels; they sold readily for one hundred dollars, were large, high-colored, and excellent. Last year the trees were suffered to bear too full, consequently the fruit was small and inferior. Most of my fruit has been sold to dealers to sell again. I have many trees of a firm, high-colored peach; excellent for the market; we call them the "Jenks Rareripe,"—it has proved hardy. Last year many of them rotted on the trees, I think by reason of there being too much water in the ground, as several other kinds were affected in the same way. "Crawford's Early" are as handsome as any that I have cultivated, but I think they are rather tender, and very sensitive to our winters. The large white and yellow rareripe, "Coolidge's Favorite," the old large red rareripe, have each proved hardy. Although I adopted the heading in, from the first, and continued it for several years, yet some kinds, such as the Early York, Gross Mignonne, Royal George, &c., would soar aloft, the lower limbs dying out. I have thought my trees were more hardy than some other orchards, by reason of the stocks being selected from seed of the native, unbudded fruit. I have kept out all dead wood, trimming in the autumn, removing sometimes large limbs that interfered with my apple trees; where they were severed from the trunk would become hard and dry before spring, therefore send out no gum.

In the first starting of my peach orchard, the grubs took to them so that I began to think they would destroy them entirely. I took air-slaked lime, removed the earth from near the trunk of the trees, and applied about two quarts to each tree, pressing it up close to the tree; this was done in June, for two or three years, and it proved effectual. Now it is evident we can have a crop of peaches when the mercury falls twenty below zero; but the reason, to my mind, is that the wood has well ripened the previous autumn, the blossom buds never swelling or starting until spring. It often happens that we have a warm spell of weather in November, sometimes later, that starts the blossom buds, after which, extreme cold, say a few degrees below zero, will be death to them. The soil on which my orchard stands is mostly warm, dry soil, with a hard, gravelly sub-soil underlying it, on which the apple flourishes finely, and its nature is to stand a drought extremely well. A. G. BRADSTREET.

Locust Glen, Danvers, May 20, 1858.

REMARKS.—Mr. BRADSTREET, will please accept our thanks for this excellent article upon the culture of the peach. We have no doubt it will be the indirect means of supplying many families with a supply of that delicious and wholesome fruit.

COAL.—Ere we wrap up this carboniferous integument of the landscape, let us mark to how small a coal-field England has for so many years, owed its flourishing trade. Its area, as I have already had occasion to remark, scarcely equals that of one of our largest Scottish lakes, and yet how many thousand steam engines has it set in

motion—how many railway trains has it propelled across the country—how many thousand wagon loads of salt has it elaborated from the brine—how many more millions tons of iron has it furnished, raised to the surface, smelted and hammered! It has made Birmingham a great city, the first iron depot of Europe, and filled the country with crowded towns and busy villages. And if one small field has done so much, what may we not expect from those vast basins laid down by Lyell in the geographical map of the United States?—*Hugh Miller.*

For the New England Farmer.

TABLE OF MEASURES OF LAND.

Knowing the difficulty often experienced by farmers and others, in laying off small parcels of land to be used in making an experiment in growth of crops, or application of manures,—I have prepared a small table of measures, in the simplest form, which may be useful to the readers of the *Farmer*.

It will be seen by reference to the plan that a practice sometimes followed by farmers is very erroneous; if the side of a square containing one acre measures 208.71 ft., one-half that length will not make a square containing one-half an acre, but only one-fourth an acre, and one-third the length of line will enclose a square of one-ninth an acre, and one-fourth the line, squared, will contain one-sixteenth an acre, and so on, the square of the fraction of the line taken will give the part of an acre enclosed.

ONE ACRE CONTAINS

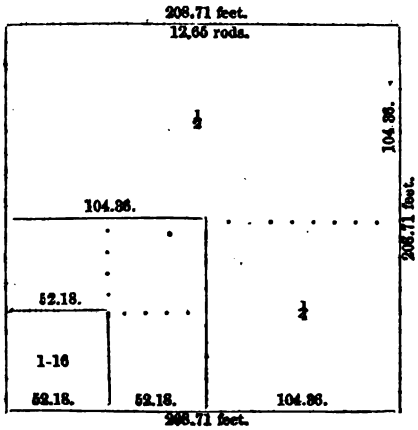
160 square rods; 4840 square yards; 43,560 square feet.

ONE ROD CONTAINS

30.25 square yards; 272.25 square feet.
One square yard contains nine square feet.

THE SIDE OF A SQUARE TO CONTAIN

One acre	208.71 feet.	12 65 rods	64 paces.
One-half acre	147.58 "	8 94 "	45 "
One-third acre	120.50 "	7.30 "	37 "
One-fourth acre	104.36 "	6.32 "	32 "
One-eighth acre	73 79 "	4.47 "	22½ "



The square above is supposed to contain one acre.

J. HERBERT SHEDD.

Boston, May, 1858.

CLOSE BREEDING.

There has long been a controversy among men on the subject of close breeding, some contending that it is very injurious, others that it is not seriously objectionable. By close breeding is meant, breeding by animals of near affinity of blood. It is contended by the objectors to close breeding, that fowls, sheep, hogs, and cattle that are bred for a long series of years in the same flocks, without the addition of any alien blood from other flocks or breeds, surely degenerate and become less useful. And this is given to account for the unserviceable fowls, the gaunt hogs, the weakly sheep and the scrawny cattle that are so frequently found on old farms, among old-style farmers. Those who see no objections to close breeding cite many examples of it to sustain their views, such as Flying Childers, a horse of unrivalled beauty and speed, known to have been closely bred; the Darby Game fowl, bred at Knowsley Park for several hundred years without change from the blood of the original stock; the pair of wild geese brought by Col. Jaques, of Somerville, Mass., from Canada, in 1818, whose stock at this time, bred in a direct line from the original pair without the addition of any strain of new blood, is not the least degenerated. But notwithstanding these isolated cases of the seeming safety of close breeding, we must give our testimony strongly against it. We cannot but feel that close breeding among human creatures or animals is generally attended with bad effects. It is true, cousins may marry with safety to their offspring, but it is very common that bad results are known to follow. We have seen nor read of no great man nor woman the offspring of cousins. And we believe that the children of cousins are generally inferior to their parents. The same physiological laws are in action in both human and animal creatures. It is a law, we believe, of human physiology that similarity of temperament is unfavorable to the offspring, whilst dissimilarity of temperament is favorable. Now, it is a general rule that similarity of temperament obtains in families. This will be especially the case if families should breed in-and-in for several generations. Even in this view of the subject it is best often to seek favorable crosses in breeding animals.

It is well known that the barn-yard fowls on many farms are very unserviceable. It is known, too, that this is not for the want of good fare, shelter, &c. It is known, also, that in many instances these fowls have been bred-in for many years without a single fowl from any other flock being added. The inference is very plausible that close breeding has affected them unfavorably.

We know a woman whose hens have for several years been very serviceable. She is the wife of an intelligent and successful farmer, and she laughs at the mania for foreign fowls. She thinks she can show as large eggs and as many from a hen, as much profit with as little expenditure as anybody. Her plan has been for many years to breed from her best hens, to set only the largest eggs. If she sees a fowl in any neighbor's yard that is very fine, she buys it or swaps for it; if she sees a very large egg elsewhere, she secures it if possible; thus constantly bringing new strains of promising blood. Her fowls

are large, healthy, and thrifty. Being well cared for every way, they are very productive and serviceable.

We believe this is the best plan to secure useful fowls. The same general principles will apply to raising all kinds of stock.—*Valley Farmer.*

INCREASING THE QUANTITY OF CREAM.

A gentleman in Brussels, Mr. BAKAERT, sometime since assured the public that he had at last been successful in his efforts to discover a process for increasing the quantity of cream from milk. The process by which this is accomplished is as follows:—

To every two quarts of milk, add a tablespoonful of liquid made by dissolving in a quart of water one ounce of carbonate of soda, one tea-spoonful of curcuma, or tumeric, and three drops of marigold water is added. The action of the soda is, according to Mr. Bakaert, to cause a greater quantity of cream to be separated from the milk than would otherwise be; while the other ingredients render the quality and color of the butter superior to that of butter produced in the ordinary way.

We are not satisfied that this boasted discovery will be of any great utility, after all. It is somewhat difficult to conceive how the carbonate of soda can produce the action or result which, in this case, is attributed to it. As to "coloring" and "flavoring" butter, when the latter is properly made, it is to be regarded as of a piece with "gilding refined gold," or to add perfume to the violet. The milk of cows, judiciously kept, if well managed, will always produce butter of a good color and flavor, and the attempts of some to render their butter more saleable in the principal markets, by coloring it with pigments of various kinds, is, at best questionable as to its utility, and generally to be deprecated as a decided injury to the article when it is to be kept any time before being used.

In a paper now before us, we notice an article in which the yellow Altringham carrot is recommended as an excellent article for coloring butter! The yolks of eggs, and otto, are also used in some localities, for this purpose, as are various other vegetables and *drugs*. Every thing added to good butter,—after a little salt,—hurts its keeping qualities, changes that sweet, delicious taste that good butter always has, causes it sooner to become rancid, and depreciates its true value.

AS TO GOING TO PARTIES.—"Extensive and promiscuous intercourse with mankind has few advantages for the man of thought. Access is not thus to be obtained to what is most valuable in others. Better for the studious, thinking man to be much alone, cultivating acquaintance with the inside of good books and himself, than with the outsides of other people."

A NEW VINE PROTECTOR.

We have seen a new contrivance to protect squash, melon and other vines from the ravages of bugs, which we think cannot fail to be efficient. The largest in size and form resembles a half bushel measure; the sizes then decrease so as to allow three others to be packed into the first, forming a nest.

They are made of scaleboard, about an eighth of an inch thick, got out by machinery from chestnut timber; are about eight or ten inches high, and fastened with copper nails. The top being covered with gauze, a hoop is pressed down over it and the thing is complete. It is light, cheap, durable, and will prove just the article needed. They are made by Mr. J. C. GOVE, of Leominster, and are for sale by Nourse & Co., 13 Commercial St., Boston.

For the New England Farmer.

NEW ENGLAND FARMING.

It is evident that the cultivator of a naturally unproductive soil needs more agricultural knowledge than one who cultivates a soil naturally rich in the elements of productiveness; for while the latter has to do only the commonest operations, such as call for a moderate outlay of physical force, the former has to do many things that could not be done by the mere exercise of brute strength, or could be done only at an unwarrantable expenditure of time and money. The latter has to do scarcely more than plow, sow and reap, while these constitute but a small part of the necessary labor of the former.

The latter may plant any seed on any portion of his farm and he will get good crops, while the former must know what parts of his farm are best adapted to the growth of particular crops and what elements he must supply to make certain parts yield desired crops. He must know, too, whether his farm contains within its limits the elements requisite for the restoration of the balance between its different parts; whether the swamp contains substances wanted by the sandy plain to render it fertile; and on the contrary, whether the soil of the sandy plain can be transferred with profit to the rank and heavy swamp land.

In short, as has been said a thousand times, he must have an acquaintance with the chemistry of agriculture, and after he has an acquaintance with it, he must put it into practice; in other words, he must proceed to experiment upon his knowledge. He may be successful or otherwise. Very likely his trials may lead to some useful discovery. At any rate, the fountains of thought will be broken up, and new ideas will pour in upon his mind. Having acquired knowledge upon one subject, he will begin to long for knowledge upon other subjects, and having disciplined his mind somewhat, as he has been forced to do in making his first acquirement, he will begin to feel the value of mental discipline, and to possess more of it will be his aim, until at length he will be the owner of a store-house of information, and the master of a well cultivated in-

tellect. Such would seem to be the legitimate course of things with the tiller of an unfertile soil.

The Illinois farmer need not, and therefore will not, trouble his brain about the chemical properties of the soil or those of manures, nor about the proper method of bringing the two together so that the heaviest crop may be obtained. He can get heavier crops from his luxuriant prairie land, without the knowledge of these things, than we, in New England, with the aid of the whole circle of sciences, from our stubborn soil. So long as this is the case, New England will furnish the most intellectual farmers. Here will be the birth-place of the best ideas upon the subject of agriculture. J. B. R.

May 19, 1858.

REMARKS.—Excellent, and ought to be well considered by every reader.

For the New England Farmer.

STICK TO YOUR BUSINESS.

"Gentlemen, we are about to separate—you to enter the arena of a hard profession; a large part of you I may never see again, and you will pardon me for the freedom of speech I have used in giving you my parting advice. Allow me to sum up the whole matter in a few short words which have passed into a maxim. Short, it is true, but of vast import—*Stick to your business.* Let come what will, be true to your profession and stick to it—let no consideration whatever divert you from it—give to it all the energy of your nature." These were the parting words of Prof. SEWELL, now dead, of Washington, D. C., to a graduating class of medical students, in the spring of 1842. He went on further to say, that if any of the class present had any doubts in regard to their future success in business, if they would follow the maxim to the best of their ability for ten years and did not succeed equal to their expectations, if they would come to him, or acquaint him with the fact, he would set them up in business with a competent income. About one-half of that class the writer of this has kept the run of, and they have no occasion to avail themselves of the doctor's offer, even if he were living. Thus it is in every department of life. I have yet to learn that one occupation of life is more honorable than another; it is the *man* who honors the business, and not the *business* the man. At the present day, there is great need of the application of our text—*Stick to your business*, and if in connection with this, John Randolph's motto be put in force —*Pay as you go*,—success is morally certain—failure would be impossible.

It is said a *rolling stone gathers no moss*, and if the setting hen does not grow fat, she does not wear herself out in fruitless changes. So, young man, farmer it may be, *Stick to the farm*, work on, do not be allured from it by the fine stories which come to every one's ears, about the West, California, and particularly of city life. Pay no attention to what that *nice* young cousin of yours has been pouring into your ears. He has only returned to the old farm to rusticate a few weeks, so he says. If he would only tell you the *whole* truth, you can well afford to let him "spread himself" during that time; but I am fearful he will not initiate you into the *whole* of his city life.

There is probably no other business where the same amount of capital is invested and tact required, so free from anxiety and care as that of farming, and by general consent, none that pays better in the long run; there may be exceptions, of course. No matter what one's business may be, if he *sticks* to it, success is almost certain, but if there is a rule without an exception this is one. It is related that a certain person undertook to insult Billy Gray by telling him he remembered when he was only a drummer. "Ah! yes," said Billy, but didn't I *drum well?*" Billy stuck to it, and succeeded. So will you, farmer, mechanic, boot-black, merchant, factory girl, *et omnia*, &c., only stick—stick to it—that's all. NORFOLK.

King Oak Hill, 1858.

EXTRACTS AND REPLIES.

RULE IN PRUNING TREES.

This is my rule in pruning trees:—"Every branch that beareth not fruit is cut off, and every branch that beareth is purged that it may bring forth more fruit."

After the fruit is set is the time to prune and purge, that the risk which is incurred by pruning earlier or later than this season—the risk of cutting off fruitful and leaving unfruitful branches, —may be avoided.

Nature has given every tree the most advantageous form, and man can gain nothing by altering that form; his business is to remove the unfruitful, and so feed and purge the fruitful branches of the bearing tree, that it may be a profitable bearer of food and enjoyment to him and his. C. C.

Winchester, June, 1858.

REMARKS.—Very well, friend "C.," we are glad of your opinion on this important subject. But branches on which no fruit is set this year, would be quite likely to bear abundantly next year, if they were permitted to remain.

PEAR TREE BLIGHT.

Will you inform me of the cause of the blight which is upon my pear trees, and also the remedy? I have six young trees which are more or less affected, and I am fearful I shall lose them; they all appear to be in a healthy condition otherwise. I send you two of the leaves, that you may see how it works.

I send you, also, a leaf from an oleander, which has something on the back of it which is sapping the life from the plant; if you can tell what they are, and the cause and remedy, you will oblige my wife, who is a constant reader of your valuable paper. J. F. RAYMOND.

Hopkinton, May, 1858.

REMARKS.—There is considerable of the blight in pear trees: the subject of cure and remedy has often been discussed with little or no benefit to the pear grower. We know of no remedy.

The only safe remedy for the oleander is to brush off the insects carefully into a saucer, and

burn them; this may be done with a feather or soft brush. This can well be afforded with parlor flowers.

—

BUTTER STOCK.

I am pleased to learn that William S. Lincoln, Esq., of Worcester, has a cow that has yielded eighteen pounds of butter a week, this spring. I am not informed as to her specific name, if she has any—but if she continue to do as well as this through the summer, she will be entitled to stand alongside the famous "butter stock" from Framingham. We have in Essex several cows that yield sixteen pounds of butter a week—but none that come quite up to eighteen—since the famed Oakes cow, which yielded more than nineteen, and nearly five hundred pounds in the course of the season. I am glad this cow has fallen into so good hands. Nobody understands dairy management better than Mr. L., or can tell his cow's story with more effect. CREAM POT.

May 31, 1858.

—

SHEEP AND OATS.

If "S. D. C.," of Sunderland, will take the trouble to read the communication entitled, "Feeding Oats to Breeding Sheep," from the beginning, he will find that the question was not whether breeding sheep should be "fat as a hog," but whether oats were injurious to breeding sheep, yea or nay. One writer whom I quoted stated that he fed three sheep two quarts of oats per day, and lost his lambs, as he thought, in consequence. Judging from his statement his sheep must have been fat, but perhaps not as "fat as a hog." What I meant to suggest was, that perhaps his sheep lost their lambs because of their condition, and not because of the oats. But how or where he gets the idea that I preferred poor starved scalawag sheep to raise lambs from, is more than I can imagine.

N. Thetford, Vt., 1858. SOLON H. BERRY.

—

RHUBARB PLANT.

Will you or some one of the numerous readers of the *Farmer*, please give me information as to which of the various kinds of rhubarb is best to cultivate solely for the root, as a medicine? Also, information as to the method of raising cranberries from the seed, time and mode of planting, and oblige A SUBSCRIBER.

Vermont, June, 1858.

—

USE OF COAL TAR.

What will coal tar in a liquid state do towards keeping vines free from insects? It will preserve wood from injury by worms and bugs. If it is used, it should be quite weak, say a pint of tar to a gallon of water; if applied to the trunk of peach and apple trees, it will keep off borers. By wetting a brown paper and putting it around the trunk just below and above the ground, or wet straw in it, and secure it to the tree with twine, it will be equally good. S. A. S.

—

TRANSPLANTING STRAWBERRIES.

Will you, or some one of your correspondents, please to inform me which is the best time to separate and transplant strawberry vines? I have a fine bed which I wish to enlarge; therefore, the above information will be gratefully received by A YOUNG SUBSCRIBER.

REMARKS.—The early spring is probably the natural and proper time to transplant strawberry plants. We do not think August or September so good as the spring.

—

AIR-SLAKED LIME FOR PLANTS.

I wish to inquire how I can best apply air-slaked lime to my crops of corn and potatoes. The land is dry and sandy. Shall I put it around the plants at the second hoeing, or shall I sow it broadcast and hoe it in? C. W.

Indian Orchard, Mass., June 2, 1858.

REMARKS.—Apply it to the hill at the first or second hoeing, occasionally omitting a row in order to see what the effect is.

—

WHAT I CALL A GOOD COW.

After using what milk we need for coffee and tea, for a family of four persons, we make about *nine* pounds of butter a week from my cow. I call her a good one.

Reading, Vt., 1858.

EATING AND SLEEPING.

Hall's Journal of Health says: "For persons who eat three times a day, it is amply sufficient to make the last meal of cold bread-and-butter and a cup of warm drink. No one can starve on it, while a perseverance in the habit soon begets a vigorous appetite for breakfast so promising of a day of comfort."

Yes, yes; and by *omitting* the third meal, the individual, besides securing a night of sound sleep, will not find on awaking in the morning a bad taste in his mouth so indicative of general foulness.

If one would always have a sweet mouth and a clean tongue, he can secure them both by simply ceasing to overtax his stomach. This frequent eating is an idle, mischievous habit, ruinous of both health and comfort; and it prevents the individual from receiving the great amount of enjoyment which it was intended he should receive from eating, and which is necessary to perfect nutrition.

Nothing should be eaten between the regular meals, whether these meals are taken either two or three times a day; nor should one eat so that the quantity ingested will induce heaviness or uncomfortable feelings.

The cook tastes the food she prepares; and by this frequent tasting she destroys both the relish for her meals, and her health. There are many housekeepers who have the same pernicious habit.

We know farmers who, at the close of a long summer day, during which they have eaten heartily five times, and worked hard from four o'clock in the morning to nine at night, eat freely just before going to bed.

The stomach, already enfeebled by constant working under disadvantageous circumstances, has now imposed on it an impracticable task, and the men lie down to sleep! Next morning they

are nerveless—have scarcely slept all night—feel more wearied than they did when they lay down—and, on the whole, think the farmer lives a dog's life. So he does, so far as he sinks to mere animalism—living to eat—taxing his digestive apparatus at the expense of health, life, and life's enjoyments. So on from day to day, till nature makes a desperate effort to rid the body of the superfluous food introduced into it, burning it up by fever, or expelling it by some different remedial effort.

Farmers, being so much in the open air, with abundant exercise, *should* be the healthiest people; but, like others who are cursed with "*abundance* of bread," they are rheumatic, bilious, dyspeptic. This is a shame and a sin. Farmers! it is sin. Your liver complaints, chill fevers, etc., are as unnecessary as is the plague. Health and sweet sleep will come to you when you need, unless by bad habits you drive them away. "Go, and sin no more."—*Life Illustrated.*

For the New England Farmer.

CATTLE DISEASE.

MR. EDITOR:—Can you or some of your correspondents give us information about a disease among our young cattle? About the first of September last, a party walking over a pasture belonging to one of my neighbors found a fine calf dead, which had probably been so three or four days. It may be well to state here that the pasture is on a high hill, one of the best in the vicinity, and has been used as a pasture for thirty years. Some days after another calf was found dead, and a few days after two more died. The owners then removed those remaining from the pasture and bled them in the neck. Was this a judicious course?

The next day another died and the day after another. These last had probably contracted the disease before their removal from the pasture. I saw the last one while sick (for it was well at night and died before noon the next day.) It staggered about, lying down and rising often. Its eyes rolled around. The body was swelled slightly and a white froth came from its mouth. I should think its head and stomach was the seat of the disease. A week after, a yearling was found dead in the same pasture. The remaining cattle, consisting of yearlings and two years old, were driven from the pasture and bled, (with the exception of some half-dozen owned by a man living at a distance,) in the same manner as the calves, viz., in the neck. The amount of blood taken varied from one to two quarts. The number bled was eighteen. Those remaining lived and were in good condition when taken from the pasture. It was supposed that it would be safe to turn cattle of the same age into the pasture this spring, but it proved otherwise for about a week after the owner had turned his cattle to pasture a fine yearling, one of the calves which had escaped last year, died. In a pasture on the same hill, a short distance from the one noticed above, a calf died last year. It was skinned by the owner and buried. I ought to have said before, that in the first named pasture the cattle which died were neither opened nor buried, though the two calves which died near the house were buried. This spring, a few days after the young cattle were turned into the last named pasture, a yearling died. Being much interested, three of us examined this animal. It could not have been dead more than fifteen or twenty hours. It lay in a clump of spruce bushes, where it had apparently laid down a short distance from the others, and after a short struggle died. Its body was swelled, but the neck was very much swelled. Upon opening the skin the neck was very black, the neck veins much swelled. The body looked as natural as common. The peck or second stomach was swelled very hard, and the inside skin as rotton as wet brown paper, and of a chocolate color. The rest of the body was a natural color. The head, neck and stomach appear to be the seat of the disease. Would poison produce the above result? They die so suddenly there seems to be no chance for the application of remedies. Would it be best to remove cattle of that age from the pasture? Since writing the above, another yearling died, the appearances indicating the same disease. Will Dr. Dadd or some other veterinary physician give his opinion? B.

Campton, 1858.

REMARKS.—We can throw no light on this unfortunate visitation of disease. Dr. DADD will impart any information he may possess, but would undoubtedly prefer to do it through his own excellent *Journal*. We shall be glad to have him reply through our columns, but will copy with pleasure from his own.

For the New England Farmer.

THE HORSE POWER MOWER.

I want to hear the click of this implement. The abundant grass waving over the plains invites its use. Imperfect as have been most of those that have been brought forward, either through defect of principle or material used in their constructions, still they are a decided improvement on the ordinary scythe operation. I know a single machine, of Manny's pattern, with which more than three hundred acres of grass have been cut within the last three years, averaging, at least, one and a half tons to the acre, on time not exceeding fifty minutes to the acre. I have good reason to believe that Allen's pattern has been used to better advantage than this. Either of them will be a saving of one-half the expense of cutting by the scythe. Will farmers neglect such a boon, when they can grasp it at their pleasure? ESSEX.

June 10, 1858.

TO TELL THE NUMBER OF DAYS IN THE MONTH BY COUNTING THE KNUCKLES.—By counting the knuckles on the hand, with the spaces between them, all the months with thirty-one days will fall on the knuckles; and those with thirty days, or less will come on the spaces. January, first knuckle; February, first space; March, second knuckle; April, second space; May, third knuckle; June, third space; July, fourth knuckle; August, first knuckle; September, first space; October, second knuckle; No[illegible]

For the New England Farmer.

THE TRUE FOWL-MEADOW.

BY LEANDER WETHERELL.

There are two distinct species of grass, and by some botanists considered of different genera, called fowl-meadow by the farmers. One of them is called *Poa serotina* by Gray, and the other *Glyceria nervata*, the latter being indigenous to America and the former to Germany. The American grass is called *Poa nervata* by Willdenow, and most of the old botanists; also by Wood, in his "Class-Book of Botany." In Flint's "Grasses and Forage Plants" it is called *Poa nervata*, with the popular English names, Meadow Spear grass, Nerved Manna grass. The former, whose cut was given in the *Farmer* of last month, is called in the same work, *Poa serotina;* English names, Fowl-meadow—False red-top. It is also called a native of Germany. The object of preparing this article, is to show that the American *Poa nervata*, or *Glyceria nervata*, and not the German grass, *Poa serotina* or *Poa fertilis*, is the TRUE FOWL-MEADOW GRASS of our intervals and wet meadows or swamps.

The first description of the agricultural value of this grass I have been able to find, is contained in the "Essays upon Field-Husbandry in New England," by the Rev. Jared Eliot, of Connecticut, and was written in 1748 more than a century ago.

After claiming Indian corn as a native of this continent, Mr. Eliot adds, "There are two sorts of grass which are natives of the country, which I would recommend,—these are Herds-grass, (known in Pennsylvania by the name of Timothy-grass,) the other is Fowl-meadow, sometimes called Duck-grass, and sometimes *Swamp-wire Grass*. It is said that Herds-grass was first found in a swamp in Piscataqua (now Portsmouth,) by one Herd, who propagated the same; that Fowl-meadow-grass was brought into a poor piece of meadow in Dedham, by ducks and other wild water-fowl, and therefore called by such an odd name. It is supposed to be brought into the meadows at Hartford by the annual floods, and called there Swamp-wire grass. Of these two sorts of natural grass, the fowl-grass is much the best; it grows tall and thick, makes a more soft and pliable hay than Herds-grass, and consequently will be more fit for pressing, in order to ship off with our horses; besides, it is a good grass, not in abundance inferior to English grass. It yields a good burden, three loads to the acre. It must be sowed in low, moist land. Our drained land, (meaning swamps,) when it is of sufficient age, is land very agreeable to this sort of grass. As the seed is very fine, there is danger of sowing it too thick, as some have done, so as to come up thick like hair; this is a loss of seed and prejudicial to the grass.

When you bring to a swamp by flowing—have killed your bushes, and have ditched your land, and got it a little dry, you may sow the seed among the trees and the bushes; it will come up and establish itself, and prevent bad grasses from taking possession; then you may clear off the wood and brush at your leisure, and you will have good grass to mow as fast as the land is cleared. I have seen it grow knee high where the dead brush were very thick.

"This grass has another good quality, which renders it very valuable in a country where help is so much wanting; it will not spoil or suffer, although it stand beyond the common times for mowing. Clover will be lost, in a great measure, if it be not cut in the proper season. Spear-grass, commonly called English grass, if it stands too long, will be but little better than rye straw; if this outstand the time, it is best to let it stand till there comes up a second growth, and then it will do tolerably well; but this fowl-grass may be mowed any time from July to October.

"One of my sons told me, that at New Fairfield, he saw some stacks of it, that the people told him were cut in October; he pulled out some of the hay; it looked green, and had a good smell. This is a great convenience in time of sickness, or any other casualty whereby we may be hindered from mowing in season. This good property renders it a fit sort of grass for a new country, where we often have business crowded too hard upon us. Although Herds-grass be a valuable sort, yet the Fowl-meadow has quite eclipsed its glory."

In a subsequent essay Mr. Eliot, alluding to this grass, again remarks:

"In a former essay, I mentioned the strange and peculiar property of Fowl-meadow grass, that it will hold out to be in season for cutting from the beginning of July till some time in October; this I wondered at, but viewing some of it attentively, I think I have found the reason of it. When it is grown about three feet high it then falls down, but does not rot like other grass when lodged; in a little time after it is thus fallen down, at every joint it puts forth a new branch; now to maintain this young brood of suckers there must be a plentiful course of sap conveyed up through the main stem or straw; by this means the grass is kept green and fit for mowing all this long period.

"Whether this young growth from the joints be owing to the horizontal position of the straw, or whether it is a confirmation of that doctrine that the joints of plants are seed-vessels, I leave for Naturalists to determine.

"I find by experience that the best time to mow this grass, is when these new branches or suckers have obtained their full growth."

Thus have I copied in full what Mr. Eliot's Essays contain on this interesting topic to the farmer.

In the Patent Office Report of 1863, is a statement relative to this same species of grass, by Archibald Jones, Frankfort, State of Maine. Says Mr. Jones:—"Among our native grasses, I would call attention to the Fowl-meadow, which grew wild at Madawaska before it was settled by the Acadian French. It flourishes best on intervals, which in the spring are overflowed, receiving a rich deposite of sediment. It grows well also on land artificially flowed, provided the water be drawn off before warm weather, and the land well drained; if not, water-grasses will prevail over the Fowl-meadow. Under favorable circumstances such as indicated, it produces a more valuable crop than other grasses. Water lying upon it all winter will kill it; but an occasional overflow will not.

"Cutting it three or four years before the seed ripens, will cause it to disappear. For hay, it

THE TRUE FOWL-MEADOW:—Poa Nervata.

should not be cut before the seed is ripe. When sown, it tillers like rye and wheat, and in such cases is short lived. To meadows that have been cut two years in succession, before the seed is ripe, harrowing is beneficial, and by breaking the long and fibrous roots, the plants are multiplied. If the meadow be soft and miry it should be harrowed in the spring before the frost is out.

When feeding out the hay, it is a good practice to save the seed, chaff and all, and sow it on swales, moist upland, and well drained lowlands that are occasionally submerged. In all situations it produces seed in abundance, which will readily germinate among other grasses. Sown liberally over moist mowing-fields, it serves to keep out foul vegetation, otherwise prevalent.—Every farmer should cultivate a small patch for seed to be used as aforesaid.

Fowl-meadow makes excellent fodder for sheep and cows; but for horses it is too fine to distend the bowels when fed with grain. However large the produce, it is never coarse, the buts being eaten with the same relish as the finer parts; consequently there is little or no waste. If the burden be heavy, it does not fall flat by its own weight, but 'cripples,' the lower part near the ground with the top erect. If bent down by a summer freshet, new plants start from the joints and increase the yield without rot or decay.

"The stalks of this grass near the ground are small and wiry, and full of joints, containing little moisture, consequently are easily made into hay; and as the upper portions are small and limber, it is very little affected by rains while lying in cock in the field. Hence it is easily cured for the mow or the stack."

In a letter from Mr. Jones, he refers to Mr. Eliot as quoted above; he also adds that "it is a native grass of Maine and New Brunswick, growing abundantly on the intervals of the St. John's before the arrival of the Europeans. Wild lands cleared near the intervals of Madawaska require no seeding, the seed having been diffused by the moose, deer and cattle, feeding on the grass."

"For cattle and sheep it is preferred by those best acquainted with it, to Timothy or herds-grass. It never rusts, and may stand late without suffering injury,—is easily cured, a ton of it occupying a less space, it is said, than any other kind of hay.

Fowl-meadow is like red-top. On lands suitable for it, the crop is superior to red-top. Unless seeded once in two or three years it runs out. It is most grown in the country back of Portland, where seed enough may be obtained, and that, too, of the right kind. The best time to sow the seed is in August, when Nature sows the seed. It may, like other grass seeds, be sown at any time and with any other kinds. If the seed be scarce, a peck per acre, on suitable land, will soon spread over the whole. It will grow on any land not too wet, but best on lands subject to overflowing by spring freshets, if well drained, after the waters subside. A common fault is, that such lands are not well-drained, and consequently, the water-grasses crowd out the Fowl-meadow. Dry weather has but little effect upon Fowl-meadow."

The two descriptions of the True Fowl-meadow, native American, *Poa nervata*, the former by the Rev. Jared Eliot, of Killingworth, Ct., 110 years ago, and the latter by Archibald Jones, of Frankfort, Me., are the fullest and best in print, and are worthy of a place in the *Farmer*, where they may be read and referred to in time to come.

I shall next invite attention to George Sinclair's Hortus Gramineus Woburnensis, or an account of the results of experiments on the produce and nutritive qualities of the different grasses and other plants used for food for the more valuabe domestic animals, instituted by the Duke of Bedford, and prepared and published in 1824.

His experiments with the two grasses under consideration, the German grass, *Poa serotina* or *fertilis* and the American or *Poa nervata*, or *Glyceria nervata* of Gray, resulted as follows:

The German grass at the time of flowering produced per acre, weighed while green, 15,654 lbs.; soil sandy loam; loss by curing, 9000 lbs.; hay when dry, 6,653 lbs. When ripe, per acre, 14,973 lbs.; loss by curing, 6,738; weight when dry, 8,235 lbs.; weight of the nutritive matter, 733 lbs.; this exceeds, when ripe, that of the produce cut in flower, in the proportion of 5 to 3; and the produce of the latter-math to that at the time of flowering is as 3 to 6; and to the same, when the seed is ripe, 3 to 10.

In regard to early growth this grass ranks next to meadow fox-tail, cock's-foot or orchard-grass and tall oat. It is remarkable that the latter-math should be more nutritious than at the time of flowering; but this is owing to its property of sending forth a succession of flowering culms until frost comes; hence the names, *fertilis* and *serotina*. M. Host and Schrader speak of it as a grass suited in Germany to moist pastures and river-banks.

The American grass, the true Fowl-meadow, produced per acre while in the state of flowering, 21,780 lbs.; loss in drying, 13,612 lbs.; when dry, weighed 8,167 lbs.; when the seed was ripe, 21,780 lbs.; loss drying 13,068 lbs.; when dry, weighed 8,712 lbs.; nutritive matter 1,616 lbs.; the same whether cut while in flower or when the seed is ripe, the weight at the time of cutting both being the same; a circumstance, says Mr. Sinclair, that occurs with no other grass. The nutritive qualities of the latter-math exceed that of most other grasses. The root-leaves are produced on a shoot, standing fan-like in two rows, and are very succulent.

It is a remarkably hardy grass. In Feb., 1814, after a very severe winter, this species of *Poa* was perfectly green and succulent, while not a single other species, of nearly 300 about it, remained in a healthful state.

It is a native of North America, says Mr. Sinclair, the Scotchman, where the winters are longer and more severe and the summers warmer than in our climate. Experience enables me to state that this grass possesses valuable properties for agricultural purposes,—that it is a valuable pasture grass where the soil is not too dry.

	Ger. grass.	*Am. grass.*
Produce per acre, when flowering	15,654 lbs.	21 780 lbs.
Loss in drying	9,000 "	13,612 "
Dry hay, weight of	6,653 "	8,167 "
Produce per acre when ripe	14,973 "	21,780 "
Loss in drying	6,738 "	13,068 "
Nutrition, weight of	733 "	1,616 "

Thus does it appear that the true fowl-meadow is superior to the other called by some farmers

"bastard fowl-meadow," the German grass. They resemble each other in appearance, and by many botanists, are regarded as different species of the same genus, both being esteemed as valuable agricultural grasses; the American, however, being quite superior to the German, allowing a good Scotchman to be judge, and one, too, whose name ranks among the ablest agricultural writers Great Britain has ever produced. Loudon, in his Encyclopædia of Plants, calls *Poa Nervata* a native of North America; and *Poa fertilis* or *serotina*, a native of Germany.

John Sinclair, in his "Code of Agriculture," speaking of *Poa fertilis*, says it is a native of Germany, and possesses considerable merit, on account of its early and productive growth, deeming it as being better adapted for "hay than depasturing." *Poa nervata*, he says, is a native of North America, and is distinguished for its nutritive quality,—affecting moist soil, that is perfectly drained, and is a valuable addition in the composition of pastures, and is very hardy, the herbage being rich and succulent. David Low, in his "Practical Agriculture," speaks of *Poa fertilis* as a native of Germany, where it is esteemed as one of the superior pasture grasses, where it grows in wet soils and near rivers.

Lawson, in his "Agricultural Manual," speaks of the German grass, as *Poa fertilis* or *serotina*, fertile meadow grass, as a grass growing naturally in rich and moist soils; and of *Poa nervata*, nerved-seeded meadow grass, as a native of North America, stating that it was introduced in Britain in 1822, and is an early spring grass.

It will have been observed by the reader, that the English botanists, agricultural experimenters and writers, agree in calling *Poa nervata* the true Fowl-meadow grass; also, in calling it a native product of North America. Botanists of this country, from Willdenow down to Gray and Torrey, are all agreed, with the exception of Nuttall, who calls it *Briza Canadensis*.

In Dr. Willich's "Domestic Encyclopædia," published in Philadelphia, 1821, it is called Herds-grass, White-top, Fowl-meadow grass of East Jersey. Dr. Muhlenberg thinks it the same as *Agrostis stricta* of Willdenow. [In this he is in error, for it is the *Poa nervata* of Willdenow.] It is particularly adapted to wet, low lands. It mats and consolidates the surface, continues many years, excluding every other grass, and weeds. Many worthless swampy spots in the low parts of New Jersey have been made valuable grazing land by this grass, loaded wagons having passed over places which two or three years before sowing it would scarcely admit an animal to walk over without miring.

It makes excellent hay, cattle preferring it to either Timothy or Clover, it being better than the former, because finer and more succulent. The same bulk of herds-grass, [Fowl-meadow] will weigh one-third more than the same of Timothy. Four tons is a common crop for an acre. It yields no second crop, but affords excellent late and early pasturage. It was first brought to New Jersey from New England, by the late Wm. Foster; and introduced into Pennsylvania about 1810.

Dr. Willich concludes this article by adding, The Red-top and White-top are varieties of the above ["Herds-grass"] species of grass. The latter is the larger of the two. The red-top is particularly valuable, as it will grow and sod the first year on banks, where no other grass will thrive.

Thomas G. Fessenden, editor of the old *New England Farmer*, says, this grass is called Herds-grass and White-top at the South; and we believe it belongs to the same genus with the Fiorin, first brought into notice by Dr. Richardson, an English writer on Agriculture. Fiorin is *Agrostis stolonifera*, Creeping-bent; and Fowl-meadow is *Agrostis stricta*, Upright-bent.

In these remarks Mr. Fessenden most undoubtedly labored under a misapprehension, for he acknowledges before closing his article, his want of information or ability to answer the following questions proposed by Chas. W. Macomber, of Marshfield, and published in the *N. E. Farmer* more than thirty years ago, as follows:

1. What are the properties and uses of Fowl-meadow grass?
2. What soil is best adapted to it?
3. Will it answer, provided the soil is overflowed sometimes by salt water?
4. In what manner should the soil be prepared for the seed?
5. The quantity of seed per acre?

These inquiries have all been answered in this article, but the third, which is so, by stating it is not a salt marsh grass.

John Lowell, nearly thirty years ago, addressed a letter to the Trustees of the Massachusetts Society for the Promotion of Agriculture, and after recommending Herds-grass, white and red Clover and Red-top, says, we want no more. They are better for us than any of your outlandish grasses. But wait, gentlemen, I reply: There is the Yankee grass, unknown to *many* of you, but well known to the owner of the extensive meadows on Charles river,—the Fowl-meadow grass.

If this truly Yankee grass could be translated to all the meadow bottoms and the naturally moist, cold, half-peaty lands of New England, their produce would at least be doubled. It is difficult to procure the seed; but its value is beyond all calculation. Low meadows are furnished with Carices, unfit for forage. We have then one species of grass *not usually* known or cultivated, that is of inestimable value. It is no idle speculation, but sober fact, and unless a defender of ignorance will maintain that the Fowl-meadow grass can only flourish in the Dedham meadows, where first observed in Massachusetts, our agriculture has much to gain by the active, earnest, and assiduous propagation of this grass.

So much from Mr. Lowell, one of the best Agricultural writers New England has ever produced.

Dr. Bigelow, in his Plants of Boston and Vicinity, 3d edition, speaks of *Poa nervata*, Fowl-meadow or Meadow-spear grass, but says nothing of *Poa serotina*, the Fowl-meadow of Dr. Gray; both Professors of the same University.

Dr. Dewey, Professor in the University of Rochester, N. Y., in his Report on the Herbaceous Plants of Massachusetts, gives *Poa nervata*, Meadow-spear grass, Fowl-meadow grass; but says nothing of *Poa serotina*, it not being an American grass.

Having now set forth, authoritatively and quite

elaborately, as seen by the writers cited, the claims of the *Poa nervata*, represented in the fine cut, above, to the name of Fowl-meadow grass, it is hoped that both farmers and botanists, will hereafter distinguish between the "Yankee grass," and the Dutch grass, calling the former, as has been clearly illustrated is its rightful claim, and not the latter, THE TRUE FOWL-MEADOW, one of the best, if not the most valuable indigenous grass of the American continent, and being surpassed by few if any exotics.

ANTHRACITE ASHES.

It is, perhaps, not generally well known, that anthracite ashes—long considered worthless to vegetation, and an injury to the soil—are endued with properties rendering them somewhat valuable as manure. Those who reside in the vicinity of cities and other places where this coal is used as fuel, and where the ashes can be obtained in large quantities and at small cost, will find this article a matter of importance to their farming interests, if properly applied. All ashes act favorably on plants in general, and should never be thrown away.

Dr. DANA says, in his "Muck Manual," that from 4 to 8 pounds in every 100 parts are valuable to the farmer; and that the composition of anthracite ashes is very nearly that of soil deprived of its geine.

In referring to some carefully made analyses, Prof. NORTON, of Yale College, said, "they enable the chemist who has studied these subjects, to say at once, and with confidence, that this ash is of some value as a manure, and should by all means be so applied in cases where it can be obtained cheaply."

"In looking at the nature of these results," he adds, "we may draw the general conclusion, that in the ash of anthracite coal, we have in every 100 pounds, from 4 to 8 pounds of valuable *inorganic* material, of a nature suitable for adding to any soil requiring manures."

WE KNEW IT WOULD RAIN

We knew it would rain, for all the morn
A spirit, on slender robes of mist,
Was lowering its golden buckets down
Into the vapory amethyst,

Of marshes and swamps and dismal fens—
Scooping the dew that lay in the flowers,
Dipping the jewels out of the sea,
To sprinkle them over the land in showers!

We knew it would rain, for the poplars showed
The white of their leaves—the amber grain
Shrunk in the wind—and the lightning now
Is tangled in tremulous skeins of rain!

T. B. ALDRICH.

☞ Do you not expend time enough each year running after your neighbors' tools to pay for a complete outfit? Some men do, and exhaust the patience and respect of a good neighbor beside.

For the New England Farmer.

THE PEAR CULTURE.

I must be permitted to say that the frequent discussions in the *Farmer* upon the comparative value of the pear and quince as a stock for the pear scion, have afforded me amusement rather than instruction. They show that prejudice and ultraism still influence to a great extent those counsels which ought of all others to be eminently practical. If after so many years of trial, under so many difficult circumstances, the proper culture of the pear is still an open and unsettled question, what point in the theory of farming can be considered as fully established? I had supposed, until the discussions alluded to made their appearance, that there was very little difference of opinion among fruit-growers on the subject. I had supposed it to be conceded that both systems of culture have their advantages; and certainly I have seen nothing as yet in the arguments of your correspondents to satisfy me that such is not the fact.

In my view, the whole matter depends upon the circumstances of soil, climate and the desires of the cultivator. In the more northerly parts of New England, the quince cannot be trusted to survive the inclement winters, and some more hardy dwarfing stock, like the thorn-plum, is undoubtedly better. On a very dry and gravelly soil, the quince does not flourish, even in this latitude. On the other hand, the pear stock seldom produces good fruit upon a wet, clayey soil, however well the tree itself may flourish. As a general thing, a ferruginous soil is good for the pear, but not good for the quince stock. But most of our Massachusetts farms combine such a variety of soils, that some portions of them may be found adapted to both modes of culture.

If a man desires to leave a rich legacy to posterity, and has a soil adapted to the purpose, he can hardly attain that object more effectually than by setting out a large orchard of standard pear trees. It may take twenty, thirty or even fifty years for them to come to full maturity; but in less than the shortest of these periods they will pay for themselves. But if the farmer has neglected to cultivate a taste for fruit-growing, as most do, until gray hairs admonish him of a close proximity to the grave-yard, and still desires to enjoy some of the fruits he has neglected before he changes this sphere for another, his best chance certainly lies in the direction of the dwarf nursery.

Again, in many of our small gardens there are little spaces where dwarf trees may flourish, while standards would be cramped for room. On the other hand, with a larger space to be filled, the pear stock would form in a few years a beautifully ornamental tree.

I believe it is conceded that the quince stock produces almost invariably the largest and most highly flavored fruit. But then there are certain varieties, important in making up a good collection, which will not flourish on any other than the pear stock. Under all these circumstances, therefore, I think if the cultivator will only exercise an intelligent judgment, he will find both systems of pear culture good in their place, and will adopt either or both according to the particular purpose which he desires to accomplish.

Somerville. E. C. P.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Waterford, Ireland, August, 1857.

MY DEAR BROWN:—To show that America is not the only country where one who is so disposed may find the means to "go ahead," I will tell you how rapidly I overcame space to reach the show of the Royal Agricultural Society of Ireland. I was at Lyons, in France, on the Sabbath of August 16th, and having before seen Paris and London to my satisfaction, I took the quickest conveyance to Waterford, in Ireland, where the exhibition was to be held on the Wednesday, Thursday and Friday following, about one thousand miles from Lyons. At forty minutes past seven, A. M., I took the train for Paris, three hundred and twenty-six miles, and arrived at that beautiful city at half past six in the afternoon of the same day.

As we left Lyons, we found the land more level than it was before we reached that city, and grapes are growing finely over large tracts of even surface, extending through fields apparently of fifty or more acres.

This was to me a new feature. All along the Rhine, and through the valley of the Rhone, the grape is usually grown upon the sunny declivity of steep hills, very often terraced, and supported by stone walls at great expense of labor. Here, however, the vineyards are wide spread over rich fields, like our fields of corn, and wine is the principal product of the land, though Indian corn, which is nowhere seen in England, Scotland or Ireland, is seen here flourishing in small patches. Oxen, along this route, are worked upon the plow and cart, in pairs, drawing usually by the head; the yoke, if such a thing may be called a yoke, being laid across their foreheads and bound to the horns with leather thongs.

One would suppose that cattle thus harnessed could perform but little labor. I watched them, carefully, both on the plow and on the cart, and really could not see but that they carried their load as easily and comfortably, as if yoked in New England fashion. They hold their heads fully as high as our cattle, and walked very steadily, and I noticed one yoke in particular, hauling a load of split stones on the highway, which I thought would make a heavy load for oxen of the same size in America.

Men, women and children all carry heavy burdens on their heads in all these countries, as heavy as our men can bear on their shoulders. On the whole, I am inclined to think that both men and beasts are stiff-necked enough to take along any burden by the head, which they can carry in any other way. In some districts through which we passed, oxen were seen yoked both ways in the same field, so that if it were found that one mode is really much better than the other, one would suppose it would be universally adopted. We remained in Paris till Tuesday at half-past one, and then took the train for London by way of Boulogne.

The distance from Paris to Boulogne is not far from one hundred and eighty miles. The first part of the route is through market-gardens finely cultivated and very productive. Soon, however, the scene changes, and the land becomes level and low, and we passed through a wide extent of country devoted to pasturage. Large herds of cattle were seen grazing in the meadows, many of which appeared as if kept green by artificial irrigation. Some flocks of sheep were observed watched by shepherds with their faithful dogs. Hemp is cultivated to a large extent, and grows very tall and heavy. I noticed some tracts in which men were at work among the hemp, which reached a foot or two above their heads. Wheat and oats were just at harvest time, and looked well, though cultivated in small tracts, and a few lots in tobacco seemed to indicate that the most useless of all weeds might thrive in this part of France. At Boulogne, we crossed the channel to Falkstone in England. We embarked at about eight in a small steamer and touched English soil at about ten, where we soon took the train in the darkness for London, where we arrived at about one at night, making the distance from Paris to London in less than twelve hours, about three hundred miles. On the whole, the French railways are as well conducted and as comfortable as any I have seen. Their second-class cars are cushioned and stuffed, and good enough for anybody. The English first class *carriages*, as they are always called in England, are very luxurious, but the second class are without cushions or stuffing, and a bare board for seat and back is all they afford. The price of the second class in England is somewhat higher than the first class in America, and of the first class about fifty per cent. higher than the second. It is respectable, though not very comfortable, for a gentleman, to take the second class. We remained in London till Wednesday afternoon, when we took the Great Western broad gauge railway for Waterford. We arrived at Milford Haven, on the extreme western coast of England at one in the night, having run two hundred and sixty miles in the time, some part of the way, at the rate of fifty miles an hour. At Milford Haven we took a steamer ninety miles for Waterford, where after a comfortable sleep, rocked in the cradle of the deep, I arrived at about noon on Thursday, having made the distance of one thousand miles in a little more than three days, besides passing a good part of a day in Paris,

nearly a whole one in London, and twice crossing the channels, reckoned the most disagreeable of all passages.

I received a hearty welcome from Col. Nichols, Secretary of the Agricultural Society, who at once presented me with admission tickets to all the exhibitions, as well as to the ball, to come off that evening. Of the exhibition I shall not have occasion to speak at much length, having already, in previous letters, given a pretty full description of the animals and implements at the exhibitions in Suffolk county and of the Royal Society at Salisbury. The exhibition at Waterford was very fine, in all its departments, but I was soon satisfied that at the previous exhibitions which I had attended, I had seen very nearly the same variety that was exhibited at Waterford. The Short Horn stock was of a very high order, but although not consisting of the same animals, differing very little from those I described at Salisbury. Everywhere through Great Britain and Ireland, the Short Horn is in general regarded as the best stock, though in particular districts, peculiar varieties are bred. The agricultural implements at Waterford were nearly the same as at Salisbury. Indeed, manufacturers from England were the principal exhibitors. At Waterford, I noticed some very fine Ayrshire cows, in milk, I think the very best milking stock I have seen at any exhibition. I happened, by a single inquiry, to elicit a very warm discussion between two breeders, as to the origin of the Ayrshire stock. One of them insisted that the Ayrshire is a distinct original breed, like the Alderneys and North Devons, while the other contended that it is a mixed breed, made up, as both admitted the Short Horn to be, of other breeds improved by careful crossing. I leave the question for the decision of those who are competent to "decide when doctors disagree." Some Galloways, of very good quality, were on exhibition. From what I saw of them there, and have seen elsewhere, I should describe them as a black, hornless, hardy breed, of good size, much inclined to lay on fat, and average milkers. They are much valued for beef. There was, also, a fair show of Kerry cows, a very small, thin looking race, with very long, slender horns, and good indications for milk. They look, in general, like some very small, old cow that we occasionally find in a farmer's yard, tolerated because she happened to be a good milker, but always shown with an apology for her presence in good society.

Then we had the West Highlanders, which I have seen on their native mountains in large numbers. They are a small, "scrubby" looking race, with large horns, and thick, rough coats, valuable for the fine quality of their meat, which is fattened for the gentry, who prize it above any other variety. These cattle are raised on the Highlands of Scotland, and driven over to England for the market. I do not hear that any attempt has been anywhere made to improve them by careful breeding.

The sheep were principally Leicesters and Cheviots, and appeared very excellent of their kinds.

There was a large show of swine, principally of two varieties; the Berkshire, a black and white race, such as we see in America, from the Western States, and the Cumberland, a very large, white breed, long and well proportioned, evidently designed to inhabit a land of plenty. My impression of them, however, is that they cannot come to maturity young enough to make them profitable for rearing in New England, where I think the general opinion is in favor of slaughtering swine at an age not much exceeding one year. As I entered the show-ground I noticed the American flag flying over a tent, and on approaching found the American Eagle Mower and Reaper (Heath's Patent) there on exhibition. It took the first prize both at Waterford and Salisbury as a Mower. It was not entered for premium as a Reaper. Mr. Haskins, who has charge of the working of it, has attracted much attention by his Yankee shrewdness and wit, at the exhibitions.

At the Salisbury exhibition, when the Prince Consort called to examine the Yankee machine, and the attendants were attempting to explain the operation of it, Mr. Haskins, to the horror and consternation of the awe-stricken bystanders, stepped in and took the explanation into his own hands. His Royal Highness had the good sense to prefer the conversation of a sensible American, who understood his subject, and at once entered into the details of the matter, and at the close thanked Mr. Haskins for his assistance. It requires a good deal of intercourse with Englishmen, for an American to realize the awful distance between a laborer or mechanic and a nobleman or lord. Any American feels himself the equal of any other man alive, but English society is divided into classes, based upon titles and estates, by barriers as impassible as the great gulf itself. However, most nations have their idols, and we will not too severely criticise the taste of a nation who worship the national debt and an aristocracy, as the sources of all prosperity; and with this one ill-natured remark, I will close this letter. Wishing you health and peace, I remain your friend,

HENRY F. FRENCH.

☞ It was the saying of Sir Robert Peel, "I never knew a man to escape failure, in either body or mind, who worked seven days in the week."

A WORD FOR THE BOYS.

"No, father, I don't want sandy ridge, nothing grows there but sorrel."

"That's good enough for you, boy. You'll only waste your time and raise nothing, if you had the best of the farm. You may as well take a hard piece to begin with as anything else. I don't know about this plan that you boys have of farming for yourselves, and having the profits; I rather think it won't amount to much, after all."

"I don't think it will either, if we have nothing but sand to plant our seed in. The other boys are going to have a few rods of the right kind of land, and will raise good crops. If I can't have anything but sandy ridge, I don't want any. Harry Grey is going to have one side of his father's vegetable garden. The hired man will spade it for him and show him how to plant his potatoes, and all that he raises will be his, to do just what he pleases with. This is the way the other boys are going to do. We have agreed to sell what we raise and put the money in the missionary box."

"A poor piece of speculation. But I'll see about it, boy. You go about your work now,—there's plenty to be done, and you won't have any time for boy's plans or plays—you keep steady about it, and if the crops come in well, perhaps you'll get something extra."

The boy went to his work, but with tears and a heavy heart. "It is always just so," he said to the hired man, "I never can do anything I want to. It is so strange my father won't let me have a decent piece of land, when he has more than he knows what to do with. I won't work here all my life time, I know. He thinks I'm going to be a farmer, but he'll find himself mistaken."

Why not, Mr. Farmer, let your son choose a piece of land for himself, when you have enough and to spare? It would yield you compound interest in a few years. If you wish to bind him to the farm, first tie his heart,—and no better way can be found than to consult his wishes, and to give him your sympathies when so simple a request is made as to try his skill at a little independent farming. What if he should fail in his enterprise, which is not very likely, if you give him the aid that you ought, the time is not wholly lost. It will excite him to more diligence, and he will perform twice the labor for you that he would had you refused him. It will not be enough to give him the use of the land, manifesting no further interest in the matter. But tell him how to dress it—what kind of grain or roots will be best adapted to the soil—how to sow or plant,—and then occasionally give him a word of encouragement, should he find his labors more than he anticipated. He may, boy-like, leave his work for play, but don't chide him harshly for it, remembering the old saying, that "all work and no play makes Jack a dull boy." Give him time for recreation, and work for you will become no drudgery.

By interesting yourself a little in the boy's plans, you will gain his confidence, and cheerful obedience, making home so pleasant that he will never distress you by roaming for forbidden pleasures, or by fastening himself to associates that would work his ruin. If you, then, value the boy's happiness or your own, do not coldly repulse him, when he comes to you with what may seem a childish request. For the time, it involves as important consequences to him, as any of your own plans which have grown out of matured experience. The disappointment to him would be as great as it would be to yourself to fail in some enterprise which had long occupied your thoughts. If you keep your boy's heart, he will more than requite you in future years, when the toils and cares of life have become a burden, and you feel that you must lean somewhere,—then he will support you—brightening the decline of life, steadying your faltering steps with the same patient care with which you have guided him through the capricious years of boyhood.—*Portland Transcript.*

EARLY CLOSING MOVEMENT.—All the agricultural houses in this city have agreed to close their stores at 4 o'clock on Saturday afternoons during the summer months. The *New England Farmer* office will also close at that hour on Saturdays through the summer.

BOYS' DEPARTMENT.

POP CORN.

I will tell you, dear young readers of Mr. Merry, something about pop corn, that I am sure will surprise you.

I know that you have often paraded a saucer or small dish of the said luxury, asking mother and sisters, "Take some, please," while your face was painfully glowing, almost parched like your corn. I will tell you of a place where it is made a business, or trade. A building is appropriated to it; and six or eight persons do the work. An immense wire box is suspended over a furnace, and when half a bushel of corn is popping at one time, you may think there is a beautiful uproar—the *maize*, which is another name for Indian corn, flies about like mad. Twenty bushels bursts or pops into 240 bushels—increasing twelve-fold. They pop, and sell, in good seasons, some 240 or 250 bushels weekly. Think of that, boys and girls. Five hundred of the balls, which you see and taste so often, fill a barrel. Twenty-seven barrels are prepared in a day. Sometimes they receive orders for sixty bushels by one house at a distance. The bin or box, in which it is first placed, holds sixty bushels. It is a fine sight, too, for every kernel is perfect as a flower. A great sieve passes out all which are under size or imperfect. These go to the chickens by the barrel.

Often three barrels of sugar are used weekly, for the coating of the balls. This is a regularly made candy, which is poured hot upon the popped corn. At this place, Merriam's, Franklin Street, Brooklyn, they use refined sugar, and the pink coloring is harmless. As I looked upon the corn, or maize, I remembered that—

The life of Sir John Barleycorn
Was long since sung by Burns—
To sing of Brother Jonathan Maize,
My muse with ardor turns.

His early life was watched with care,
And guarded every hour;
One ministered to every need,
From sprouting into flower.

Young Jonathan no trouble met,
But plump and strong he grew;
Silk tassel o'er his *ear* he set,
Exquisite 'twas to view.

But now drew near his trial time—
For soon as he matured,
And just had donned his *yellow* coat,
Of proud repose assured,

All roughly seized was Jonathan Maize,
To Merriam's he was borne;
It was no *merri*-ment for him,
For he must burst or burn.

A fiery ordeal would him try—
Ah! that would test the *chit*—
If beauty, goodness, strength is there,
The fire will make the *hit*.

A furnace is in glowing heat—
Bold Jonathan, hold your own;
Hark! 'tis not *presto*, but 'tis *pop*—
Twelve-fold his size has grown.

Hurrah! hurrah! for Jonathan Maize,
Expanded by the fire!
Pureness and beauty burst to sight;
We look, and we admire.

All honored now is Jonathan Maize—
Selina's kindly hand
Bedecks him in a rosy coat,
With skilful *neatness* planned.

Then in a box that's clean and white,
He's carefully encased;
Upon my word, if you would bite,
You'd say 'twas bite well placed.

LAURA ELMER, in *Merry's Museum*.

LADIES' DEPARTMENT.

RHUBARB WINE.

To every gallon of water, add five pounds of rhubarb cut in thin slices; let it stand nine days, stirring it three times a day; cover the pan containing it with a coarse cloth; strain it; to every gallon of the liquor, add four pounds of loaf-sugar, the juice of two lemons, and the rind of one; dissolve one ounce of isinglass (to fine it) in a pint of the liquor over a slow fire, then add it, when cold, to the rest; when fermentation has ceased, bung it close, and bottle it in March. A few raisins improve it. The lemon rind should not remain in after fermentation has ceased.

Cut the rhubarb into rather thin slices; squeeze through a sieve to extract the juice; this being done, mix with it as much sugar as will suit the taste, and some water, after which it must simmer on the fire for an hour or two; then put as much yeast as will cause it to ferment; put it into a cask for three weeks; draw through a tap; bottle. It will be good at the time, if properly fermented, but, if allowed to stand a year, would be perfect.

Seven pounds of rhubarb to be bruised in a mortar; and, when bruised, put to it three quarts of water; let the water be boiled, and stand until cold; stir them every day for five days; then add three and a half pounds of coarse sugar; then put it into a bottle or cask, and in three months add a quarter of a pint of the best brandy, and in six months bottle it for use. Twenty pounds of rhubarb, twelve pounds of sugar and eight quarts of water will make three gallons.

To every five pounds of rhubarb stalk, when sliced and bruised, put a gallon of cold spring water; let it stand three days in a tub, stirring it twice every day; and then press and strain it through a sieve, and to every gallon of the liquor put three pounds of loaf-sugar; put it in a barrel, and hang some isinglass within the barrel, and bung it up directly. In six months, it will be ready to bottle. Currant juice to color, if you like.

Take six pounds of rhubarb, and cut it into half-inch pieces, put it into a pot, add one gallon of cold water, and let it stand three weeks, stirring it every day; then strain out the rhubarb, put the liquor into the pot again, and add three pounds of sugar to every gallon of the liquor; let it stand three weeks longer; then strain it through a flannel bag, put it into a keg or stone bottles, and add a little isinglass to clear it. It will be ready for use in three or four months.

Take four and a half pounds of rhubarb, bruise it in a tub with a mallet till quite soft; add one gallon of cold water, and let it stand three or four days; stir it frequently; strain it off through a wort sieve, and press the juice out; then measure the liquor; to every gallon, put three and a half pounds of moist sugar; let it stand a day or two, that all the sugar may dissolve; put it into the cask; do not stop it up close for a week; leave the top cork out; when put into the cask, add two or three ounces of isinglass; stir it well together, and in two months rack it, and run it through a flannel bag; then put it into the cask again, with a little more isinglass, if required. To ten gallons of wine, add six pounds of chopped raisins; the isinglass should be dissolved, and whisked to a froth; add what quantity of brandy you think right.—*Godey's Lady's Book for June.*

HOW TO COOK RHUBARB OR PIE PLANT.—Get the Linnæus rhubarb. It is larger, more tender and better flavored than any other, requires less sugar by one-fourth, and has no skin to be taken off. Do not attempt to peel it, but cut in pieces as long as the thickness of the stalk, and put them with your sugar in an earthen dish without water; cover it to retain the flavor, and place it in an oven and cook till quite tender without stirring or breaking the pieces. If too much cooked it assumes a disgusting stringy appearance, and loses all fruity character. The rosy color of the stalks will give your dish an attractive appearance, and the dyspeptic will find in it a powerful aid to digestion.

THE MISTRESS OF A FAMILY.—The house-mother! what a beautiful, comprehensive word it is! how suggestive of all that is wise and kindly, comfortable and good! Surely, whether the lot comes to her naturally, in the happy gradations of wifehood and motherhood, or as the maiden-mistress of an adopted family, or—as one could find many instances, in this our modern England—when the possession of a large fortune, received or earned, gives her, with all the cares and duties, many of the advantages of matronhood—every such woman must acknowledge that it is a solemn as well as a happy thing to be the mistress of a family.—*A Woman's Thoughts about Women.*

NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR AUGUST.

Now sober INDUSTRY, illustrious power!
Hath raised the peaceful cottage, calm abode
Of innocence and joy; now sweating, guides
The shining plowshare; tames the stubborn soil;
Leads the long drain along the unfertile marsh;
Bids the bleak hill with vernal verdure bloom,
The haunt of flocks; and clothes the barren heath
With waving harvests and the golden grain.

MICHAEL BRUCE.

HOT, dusty, dog-day Month is AUGUST—when the wise denizens of the city fly to the cool retreats of the country, to enjoy their *dolce far niente* there, or those who love show and excitement torment themselves in stifled rooms, preyed upon by musquitoes and *other night-walkers*, and the scarcely less remorseless customs of popular watering-places! What is Saratoga water or Sulphur water to the sweet breath of cows, and zephyrs, and the bleating of lambs or the chirping of crickets in the fresh and cool and invigorating country air?

A feeling and accomplished writer in the *Edinburgh Review*, many years ago, said, "The Year has now reached the parallel to that brief, but perhaps best period of human life, when the promises of youth are either fulfilled or forgotten, and the fears and forethoughts connected with decline have not yet grown strong enough to make themselves felt; and consequently when we have nothing to do but look around us and be happy. It has, indeed, like a man at forty, turned the corner of its existence; but, like him, it may still fancy itself young, because it does not begin to feel itself getting old. And perhaps there is no period like this for encouraging and bringing to perfection that habit of tranquil enjoyment in which all true happiness must mainly consist; with *pleasure* it has, indeed, little to do; but with *happiness* it is every thing."

Hay making is now nearly completed, or, at least, the principal part of it is done, and a generous crop has been gathered in. The copious rains of June overflowed the low meadows, and in some places, the water stood upon them so long as greatly to injure the growing crop, and make it somewhat later than usual. But a few good days in August will see these meadows cleared off.

Our farmers are learning to value this description of hay less and less, and to depend more upon the clover, red-top and timothy. There are many acres of wet meadow in New England that ought to yield better hay than they do. They need to be drained, that the surface water may run off early, and not stand upon them long enough to kill out the sweet grasses,—and now is the time to do it. There is a little respite between hay-making and harvesting, and every farmer who has a piece of meadow that may be improved by ditching, especially if it is near his dwelling, should embrace the present time to begin it, at least. For this, we might suggest several reasons. The present is usually the dryest season of the year, and of course is the most convenient time for such work. As we have already said, the farm work does not crowd as hard as it did in haytime, or as it will in harvesting, and thirdly, you need a pile of meadow muck for the barn-yard, the hog-sty, and barn-cellar, and by ditching where this material abounds you will "kill two birds with one stone."

Throw the mud into heaps, and when the ground is frozen, it will be ready to haul off. Put it into convenient piles near the barn, and let the frosts of winter pulverize it, and after you

have carried out the manure in the spring, you will know what use to make of it. You cannot spend a few days, at this time, more profitably in any other way, than in ditching and reclaiming.

AUGUST is the time for plowing and seeding down such mowing lands as need re-seeding. That is, if the work is done in this month, the grass will gain such growth and strength as to go through the winter with more safety than if postponed to a later day,—it will not be so likely to get *winter-killed*. From the 10th of August to September 20, is appropriate time for this work. There can be no doubt that this is the best way to resuscitate worn-out grass lands. But it is important that it be done in season. The warmth of AUGUST will cause the seed to germinate, and get a good start, and be prepared to resist the frosts of autumn. By this mode of reseeding, nothing is lost but the fall feed, and on land where the crop of grass is small, this is of little value.

Plow to a good depth, according to the nature of the land, and spread on a liberal dressing of compost, and harrow thoroughly. Then sow the seed and harrow again, and follow with the roller, leaving the surface as smooth as a floor. If the ground is wet, and the surface should be thrown by the frost of the coming winter, pass over it with the roller again in the spring. This will leave it in good condition for the mowing machine. The compost will give the grass an early start in the spring, and the roots will soon find the mellow, decaying sod, and you will have a full crop of grass the next season. It will be a week later than the crop on fields that have been laid down two or three years, but quite equal in quantity and quality. A good soil, moderately moist, may be plowed and re-seeded in this way, once in six or eight years, and made to yield steadily a fine crop of hay, of the very best quality, at a trifling expense.

We have long been convinced that this is the best way of treating grass lands, that are rather low and moist. If they are planted with hoed crops, it takes about three years to get the sod well rotted and pulverized. They are cold, and cannot always be planted early, and are hard to work, and the crops are apt to be injured by the cut worm, and require re-planting, and if after two or three years of cultivation, they are sowed down with grass and oats, the grass-seed is much less certain to catch well, so that on the whole, we consider *fall-seeding*, as it is called, much the most certain and economical way of keeping grass lands in good condition. But as we have already said, success will depend very much on doing the work at the right time,—and now is a good time to be about it.

In *June*, and also in *July*, we hinted at the importance of keeping a watchful eye upon the weeds. This matter is no less important this month, for now the weeds are maturing their seeds, and if you let them ripen, they will make much work for next year.

The hoeing is now generally finished, but if the ground is weedy, it will pay well to go through the field, row by row, and pull out with care all the weeds that have escaped the hoe. Make thorough work of this, and it will save a deal of vexatious labor next year.

We have a friend who takes the utmost care of his garden in the early part of the season. He rakes it over as often as twice a week, and not a weed can be found in it during the month of June. But after he has got his first mess of potatoes, which he usually does on the Fourth of July, he gets tired of the work, and hangs up his hoe and rake, and in September his ground is covered with weeds which yield a fine crop of seed, and of course, he will find enough to do next spring, and indeed, every spring, as long as he lives, if he continues the same course. Now if he would take as much pride in showing a clean surface among his plants in AUGUST and SEPTEMBER, as he does in JUNE, he would find the labor of tending his garden grow less and less every year. He is not the only one who needs a little good advice in this respect. There are many gardens that look well in the spring and early summer, but in autumn are like the garden of the sluggard, all overgrown with weeds. This is poor economy. It will be cheaper in the long run to pull out every weed that shows itself, not only in the spring, but in the summer and autumn. This will leave the ground in a state to be much more easily taken care of next year. And even if the ground is to be seeded down next year, it will pay well to keep it free from weeds, in order to prevent a mixture of weeds with the grain crop.

The farmer always has enough to do. He can never afford to be idle. But it is a matter of much importance that he be employed in labors appropriate to the season. As he cannot do every thing at once, he must use his best judgment in selecting the proper labor for to-day. Let him do this well, and to-morrow will bring its appropriate work. Thus every day will be spent to the best advantage, and at the close of the season, he will not have to lament his "lost days."

DRUGGING ANIMALS.—Continual dosing animals is just as useless and injurious to them, as is constant swallowing drugs and poisonous compounds to the human system. It is all folly to allow your stables to become hospitals, and to smell and appear like an apothecary's shop. It is much more humane to shoot a horse, or knock

an animal in the head at once, than to force down its throat doses of drugs whose quality or action you know little about, having the effect to create disease when it did not exist, and prolong suffering much beyond the time in which nature would herself effect a cure.—*American Agriculturist.*

For the New England Farmer.

A HORSE WORTH OWNING.

Mr. Editor:—The following is a biographical sketch of one of the most noble specimens of the horse species; and appreciating the design and usefulness which this superior animal, the horse, subserves to the service and pleasure of the "Lords of Creation," the writer would heartily concur with the views of others, and commend their laudable efforts to improve the condition, not only in enacting laws against inhuman and brutal treatment, but in personal care and proper attention to the keeping, driving and health of this noblest of all beasts.

"Old White," as she is called, was first owned in this town by Capt. Joshua Dodge, Mr. Dodge having purchased her of a horse-dealer at Lynn. Of her birth-place, sireship and previous history we have not yet learned anything, except that she probably passed through the hands of several owners; and it appears that up to that time, her merits were not fully discovered, as she was bought by Mr. Dodge for only fifty dollars, though then with foal. She served her owner on a farm to his highest satisfaction, till her colt was old enough and broken to work, when she was supposed to be eighteen years old, and Mr. Dodge not having use for more than one horse, sold her for fifty dollars, to Capt. George Appleton, of this town, her present owner, (and by the way, we might suppose that "Old White" must be thoroughly disciplined, as she had been under two captains, covering a period of seventeen years of her existence!) Capt. Appleton has owned her upwards of fourteen years, and her present age must, of course, exceed thirty-two years. During the time owned by Capt. Appleton, she had been put to most every use in which any horse is capable of service; and was able to perform as much labor in a given time. She would endure fatigue and exposure without disqualifying her for actual and constant work.

Even at the age of twenty and upwards, she was quite distinguished for speed; and in many instances has proved more than a match for quite smart horses. She has drawn loads of hay of twenty and twenty-five hundred weight to Salem, a distance of nine miles, without difficulty, not excepting even the steep and difficult hills on this route; and has been used in carrying the mail to the depot, Capt. Appleton being postmaster, performing this once a day most of the time, Sundays excepted, for the past ten or twelve years, and has probably by private carriage, carried five thousand to six thousand persons to the cars.

Persons of all ages, from the boy of seven to the adult of four-score years, have driven her to different places, either fast or slow, as desirable, and might leave her at any place without tying. When turned out to pasture or into the highway, she might be bridled by a mere child, and is so kind and docile, but at the same time high-spirited, as to be perfectly manageable in any hands and every kind of carriage; and until of late years has not required urging by the whip.

"Old White," in her best estate, weighed only about eight hundred and fifty pounds, and recently at her present advanced age, drew a load from Essex, over a very hilly road, weighing twenty-three hundred pounds. In regard to keeping, she has had but little grain, and other food not extra in quality; and notwithstanding her constant labor, has kept herself looking well.

One thing in the history of "Old White" is worthy of special notice, that for many years past she has been a faithful and trustworthy servant to convey a venerable lady now ninety-five years old, a connection of the family in which she is owned, to Ipswich and back again, this aged lady having in both towns sons and daughters with whom she resides alternately.

Her owner thought a few years since in the fall that he would kill her, thinking she might fail during the winter, rather than let her be sold, subject to fall into hands which might abuse her, but though she shows some signs of declining years, she still survives, and it is not impossible that she will live to bless the next generation with her valuable service. Z. A. Appleton.

Hamilton, Mass., June, 1858.

LIGHTS AND SHADOWS.

The gloomiest day hath gleams of light,
The darkest wave hath bright foam near it,
And twinkles through the cloudiest night
Some solitary star to cheer it.

The gloomiest soul is not all gloom,
The saddest heart is not all sadness;
And sweetly o'er the darkest doom,
There shines some lingering beam of gladness.

Despair is never quite despair;
Nor life nor death the future closes;
And round the shadowy brow of Care,
Will Hope and Fancy twine their roses.

Mrs. Hemans.

How to Protect Sheep from the Ravages of the Canine Species.—"A subscriber," whose sheep-fold has been often visited by prowling dogs, wishes to know how he can protect his flock. With pleasure we give the following prescription:

Beef Steak	16 ounces.
Strychnia	4 scruples

Directions.—Divide the beef-steak or tit-bit into sixteen parts; take a sharp knife and make an incision into each one of them, and insert one-sixteenth of the above quantity (which should be five grains,) drop a few of these medicated "tit-bits" around your sheep preserves, and have a few in your coat pocket, so that when you come across an ugly *cuss* of a dog—a perfect Nena Sahib—just come the "Rarey" over him—make his acquaintance, coax him to stay by long enough, while you draw forth just *one* morsel. In the name of *mutton* let the medicine be given.—*Dadd's Veterinary Journal.*

☞ When corn costs 50 cents per bushel, pork costs 5 cents per pound.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Steamship Europa, at Sea, August 31, 1857.

My Dear Brown:—After four months' absence from home, once more I am upon the sea, looking homeward, anxiously anxiously, with some two hundred others, many of whom, like myself, have been wanderers for a long season, and are now hoping soon to meet the "old familiar faces" of friends and kindred in America. If one would learn to value the peace and comforts of a New England home, let him leave it for a single season. If one would remove from his mind any lingering doubt he may entertain, that our own is the best land which the sun in all his course looks down upon, let him wander over the best countries of Europe, and he will doubt no longer. But I sat down, amid the rolling of the ship, the Babel of tongues in conversation about me, the playing with cards, of chess and backgammon, the crying of children and the rumbling of the padde wheels, to endeavor to make some use of the twelve days usually occupied in the passage.

The attempt to write under such circumstances, is indeed an illustration of the pursuit of learning under difficulties, but the consciousness that on my arrival home, other duties will fill my time, has induced me to attempt to write into publishable shape some of the notes of my travel since I wrote you at Waterford in Ireland.

At about noon on the 21st of August I took the train at Waterford for Dublin, in a second class car, in which were about two dozen men, principally Scotch and Irish, and a single moment was enough to convince me that the manners and habits of England had not followed me across the channel. The fashion in England is for each passenger to get snugly into his own corner, to draw his head as far as possible into his shell, and to neither say, hear nor see anybody nor anything on the passage, although I have usually found that a little Yankee inquisitiveness would soon draw John Bull out into something like sociability. But here, every man was wide awake, and ready for a part in any conversation that might be introduced. On my left sat a Waterford ship-builder, a shrewd and intelligent Scotchman, full of mischief and fun.

On my right was a personage, who is worth knowing, and who continued with me some days, and is worth a brief description. His dress was that of a Yorkshire farmer, which, as may be seen, would attract some attention in a New England village, though not uncommon in several districts in England. He is a large, tall man of sixty or more, of about two hundred pounds weight, with a large head, a quiet, substantial expression like a man of thought and determination, with a quizzical twinkle of his gray eye, which made me doubt from the first, whether he was not enjoying the jokes which others were putting upon him full as much as they. He had a strong accent, not exactly Irish or English, but as he soon mentioned that he was from Leeds in England, we all took him for a true Yorkshireman, a race whose dialect is as strongly marked as any in England. Our Waterford man soon commenced his attack on Yorkshire, which our man of Leeds defended in a quiet, moderate way, showing very little feeling, but pretending all the time to be an Englishman. "The Yorkshire people," said the Waterford man, "are a hundred years behind the South of Ireland, in civilization; really they are in a very degraded condition; you may take one hundred of them at random," said he, "and you will find ninety of the hundred cannot read or write. In short, sir, they are very nearly cannibals." "Do you know," said he to me, "sir, that the Yorkshire men always bite off each other's noses when they get into a fight?" An English soldier who sat in a corner, undertook to take up the defence of Yorkshire; everybody else put in a word, and I really thought we should soon be in a general fight. We all expected to hear the Leeds man burst out in great wrath upon the Scot, but he sat unmoved, till everybody else had said his say, when he looked up with a quiet smile and remarked, "Well, my friends, if we are not very rich, surely we are all very cheerful." This cool remark at once restored good humor, but the Scot had got a new idea. "You are not an Englishman," said he to the man of Leeds, "you are an Irishman by birth, though you dress like a Yorkshireman." "I did not say I was a Yorkshireman," quietly rejoined the other; "it was your own opinion you were acting upon, and I'll not contradict ye if ye abuse the English to your full content."

I kept along with the Leeds man to Dublin, and found him an intelligent and useful companion. He proved to be Mr. John Boyle, a man well known in the agricultural world for his zeal and knowledge about the culture of flax. I understood that he was hired by a Yorkshire Company to leave his home in Ireland and go to Leeds to instruct the Yorkshire people in the flax culture. He gave me a pamphlet entitled "An Essay on the Growth and Management of Flax," which may, at a convenient time, be well worth publication in the *Farmer*. Before reaching Dublin, Mr. Boyle and I had struck up quite a pleasant acquaintance, and arranged to pass the next day together in Dublin and vicinity, with which he seemed quite familiar.

We took an Irish jaunting car, in the afternoon, and rode over the city, visited the Phœnix

park, which contains about three thousand acres, and in which we saw large herds of deer quietly feeding, looked at the barracks capable of accommodating four thousand soldiers and two thousand horses, saw the equestrian statue of King William of Orange, the Nelson monument, and an unfinished monument to Wellington, and the pedestal of a statue to be erected to Tom Moore.

But it is time to describe an Irish jaunting car, the carriage in almost universal use in all Ireland. The carriage is upon two low wheels, and is drawn by one horse. It has no top or protection from sun or rain.

The seats are over the wheels, and the passengers sit back to back, facing outwards towards the sidewalks, or just the reverse of the position in an omnibus. Usually the seats carry two persons on each side, but are frequently loaded with six in all. The driver has a small seat in front, where he sits if his load is properly balanced, otherwise he occupies one side to make it even. You sit leaning sideways on the cushion which is at your back between the two seats, with your feet on a foot-board projecting outward beyond everything else, and one unused to the vehicle expects every moment to have his boots and their contents carried away by some car which rushes by. Dublin is full of these cars. Nearly all the passengers are taken to and from the stations in them, families go to church in them, or rather on them, on the Sabbath, ladies with two or three small children, or with market-baskets, vases of flowers, baskets of china, are seen rushing past in all directions, looking all the time to a stranger as if, at the first corner, they would fly off at a tangent against the curb-stones.

But the Irish insist that they are the safest, most comfortable and most convenient carriages in existence, and that noboby ever lost a foot, or was thrown off in turning. It is useless for a stranger to set up his opinion against such odds, but it did seem to me, that human ingenuity could hardly devise a vehicle for riding in, less safe or comfortable. However, I have taken pleasant rides in the jaunting cars, and perhaps, in time, should get up an attachment for them, but it must require a long practice before one can feel that he is in a very retired or even sheltered position, on the top of such a vehicle.

Next morning early found friend Boyle and myself on our way on foot to the Prospect Cemetery and the Glasneven Model farm, a distance out and back of some seven or eight miles.—Friend Boyle was in the costume of a Yorkshire farmer, with a low crowned hat, a broad skirted coat, small clothes and leather leggins tight from the knees to the shoes, over which they fitted like old fashioned buskins.

Friend Boyle's figure and gait reminded one constantly of Dr. Johnson, and as his bulky figure in his peculiar costume, attended by my lesser frame appareled in a gray travelling suit, with soft hat, and more whiskers than are common in Ireland, and a big cane with a large chamois horn head, passed through the streets, it was evident that we produced a sensation; and once a good-natured Irishman accosted us with the suggestion that we were not very well matched for a pair. However, we jogged on and soon reached Glasneven, where we entered the cemetery, which is the present burial-place for the city of Dublin. It contains forty-two acres, and is laid out with great taste and planted well with trees and shrubbery, and kept with great care. Altogether, the general impression one receives in passing over it, is more satisfactory to American taste, than that made by any other burial-place I have seen in Great Britain or Ireland.

The conspicuous object in the cemetery is O'Connell's monument, a shaft in the form of the famous round towers which are found in many parts of Ireland, and which have occasioned much speculation as to their origin and use. I have seen several of them, some nearly entire, and they seem to be of one form, a round shaft, of stone, roughly put together with mortar, tapering slightly towards the top, and running some seventy or eighty feet high. The top is drawn to a point, in a conical shape, so as to cover the hollow space within. These towers are thought to have been built in very ancient times as places of refuge in war, though many have supposed they were connected with some religious purpose. Such is the monument to Daniel O'Connell, the great Irish Repealer, a man still almost worshipped by Catholic Ireland. O'Connell's body is not deposited at this monument, but reposes in a tomb, at a short distance, in the same cemetery, except his heart, which at his own request, was sent to be preserved at Rome, to show his respect for the Pope and his religion.

Along the walks are a great many beech trees, upon which some amateur had practiced in performing a singular operation. They are trees of six or eight inches diameter, with each a single top, and two, three or four trunks. Small trees are planted within a foot or two of each other and then brought together at three of four feet above the ground, and united by a sort of grafting, one top only being preserved, so that the tree stands as it were on several legs. But my letter is already too long, and the Glasneven Model farm is close by, and calls for attention in another letter.

MOTHS IN CARPETS.—An experienced housekeeper writes:—"Camphor will not stop the rav-

ages of the moths after they have commenced eating. Then they pay no regard to the presence of camphor, cedar or tobacco; in fact, I rather think they enjoy the latter, if anything else than humanity can. Nor will the dreaded and inconvenient taking up and beating always insure success, for I tried it faithfully, and, while nailing it down, found several of the worms 'alive and kicking,' that had remained under the pile unharmed. I conquered them wholly in this way: I took a coarse crash towel and wrung it out of clean water, and spread it smoothly on the carpet, then ironed it dry with a good hot iron, repeating the operation on all suspected places, and those least used. It does not injure the pile or color of the carpet in the least, as it is not necessary to press, heat and steam being the agents; and they do the work effectually on worms and eggs. Then the camphor will doubtless prevent future depredations of the miller."—*Dollar Newspaper.*

For the New England Farmer.

SURFACE APPLICATION OF MANURE.

Where the purpose is to secure good crops of grass, I am inclined to believe this can be most succesfully done, by applying the dressing at a proper time, directly upon the surface. My faith in this belief was strongly confirmed yesterday by a view of the grounds of an intelligent gentleman who had dressed them in this manner only for a series of years; and I never saw better assurance of fine crops. I queried, whether it would not have been better to have turned over the sod, and mingled the manure with the sod, to save it from evaporation. In reply, he said, what do you want better than the present prospect of a crop? There will grow as much as can conveniently be cured upon the land, and the expense of fertilizing has not been one-third as much, as to have plowed the ground; more than this, the appearance of the field is smoother and more complete, than it could be made after repeated plowings. I was thrown into a quandary by the argument. If any of our cultivators, of long experience, who have been accustomed to turn anew their fields, once in ten years or oftener, can tell why they do it, I should be glad to hear from them. As at present advised, I believe the best crops of grass grown in this vicinity, are brought about by judicious top-dressings. I know this to be true, where kelp and other like articles can be obtained from the sea-shore, to spread upon the land. I know of fields of twenty acres or more, that can be relied on for two tons to the acre, at the first cutting, and one at the second, the sod of which has not been started for the last twenty years; these are the fields for the use of the *horse-power mower*. What kind, Mr. Editor, do you recommend to be purchased? Now is the time to prepare for the work.

June 5, 1858. ESSEX.

REMARKS.—The practice is rapidly gaining ground of keeping moist lands in grass, and of top-dressing them once in three years at least, and oftener where manure can be had. It is hardly probable that an acre of naturally good land, at the same time moist, slightly top-dressed every year as soon as the crop was cut, would run out in one hundred years. It might be necessary, occasionally, to leave the crop until some of the seed had fallen, or to scatter seed upon it with the top-dressing if the crop were always taken off before the seed had ripened.

It is a heavy bill of cost to re-seed our mowing lands as often as we do, and we hope this note of our correspondent will call out the views of others on the subject.

TOADS.

Never destroy the toad. We are assured that "nothing is made in vain," and a very slight knowledge of natural history will show us that even the toad—the most universally deprecated of all reptiles, perhaps with the exception of the viper—may be of some use. In the first place we discover that toads feed on all kinds of grubs and worms; consequently they serve to protect the vegetable kingdom from the ravages of its most insidious and destructive foes. The pestiferous canker-worm is a favorite food with him, and he devours indiscriminately, and in large numbers, for his dilating powers, and capacity of deglutition almost rival those of the anaconda. Craving only the protection of a turf or chip, he labors incessantly for man's benefit, and demands for his invaluable services no guerdon as a reward. The antipathy cherished by some towards the toad, is the consequence of perverted views, and should be corrected. In itself it is a source of misery to those by whom it is indulged, and the cause of cruelty to the innocent and unoffending. Hence it is a disgrace to our nature, which, illuminated by the divine scintillations of science, should see beyond the blinding mists of prejudice, and recognize the wisdom and goodness of Providence even in its most abject creations.—Cowper, the poet of nature, discourses admirably upon this subject.—*Germantown Telegraph.*

ABOUT THE BIRDS.

The *National Intelligencer* gives the following beautiful instance of the kindness towards each other by birds:

"A gentleman observed in a thicket of bushes near his dwelling a collection of brown thrushes, who for several days had attracted his attention by their loud cries and strange movements. At last curiosity was so much excited, that he determined to see if he could ascertain the cause of the excitement among them. On examining the bushes he found a female thrush, whose wing was caught in a limb in such a way that she could not escape. Near by was her nest, containing several half-grown birds. On retiring a little distance, a company of thrushes approached with worms and other insects in their mouths, which they would give first to the mother, and then to her young, she in the meantime cheering them in their labor of love with a song of gratitude. After watching the interesting sight until curiosity was satisfied, the gentleman relieved the poor bird, when she flew to her nest with a grateful song to her deliverer, and her charitable neighbors dispersed to their usual abodes, singing as they went a song of praise."

EXTRACTS AND REPLIES.

MANURES FOR COMPOSTING.

I noticed that one of your correspondents recommended hauling earth, leaves, &c., into the barn-cellar and weekly pouring the manure of cattle, &c., mixed with water, on the mass for the purpose of absorbing the liquid portion, and also increasing the quantity of manure.

Now if moisture is necessary to produce fermentation in the heap, would it not be better to keep the solid and liquid parts of the manure separate, until a short time before applying it? Also to keep the solid part in as compact a state as possible, by compression of some sort? Would it not save a portion of the gases that arise during decomposition? Could it not then be used in making up compost heaps, and become more valuable than if used in the way spoken of above? What is your opinion, Mr. Editor?

Lowell, May, 1858. B. F. MANN.

REMARKS.—When the farmer has a plentiful supply of good meadow muck, and his soils need vegetable matter, we think there is no way of composting equal to covering the droppings every morning with a coat of such muck, to the extent of the droppings themselves. Follow this practice for a few weeks or months, keeping out all dry and coarse herbage, and you will find a heap as rich in all the elements of fertility, as anything that can well be devised. It will be black, saponaceous or soapy to handle, easy to shovel and remove to the field and to be applied there, and we think is the easiest, cheapest, and most profitable way of preserving manures, and produces the best present and most permanent results on the crops.

If large quantities of coarse materials are to be converted into manure, we are inclined to think a good barn-yard is a good place to do it, if it is not the best. It should be dishing, shaded by trees somewhat, so provided with a coating of loam, muck, and dried herbage of some kind, as to absorb all the droppings of the stock as they are yielded. It is necessary that cattle stay in the yard a portion of the time, summer and winter, and there will always be an accumulation, more or less, of their offal,—so that something must be done to preserve what falls there, even if the yard is not intended as a place.

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HOW TO KEEP OFF BORERS.

I find in your June number over the signature of "Essex," this remark, viz.: "So fast is improvement at the present day, that it takes as much care to unlearn what is erroneously stated, as to find out by actual trial what is correct."

This is the fact, and one completely successful experiment is worth dozens of theories. I have written you an article or two on the destruction of the fruit-tree borer, and my experiments are completely successful. I will repeat it. In this month, clean the trees by rubbing with the corner of a chisel, lightly the whole trunk, including a portion of the limbs, and remove the earth low enough to cut off smoothly all the fibrous or sucker roots; then rub them all over with undiluted oil soap. I have examined all my trees, which were well stocked with borers two years ago, and there is not now the appearance of one. One of my neighbors who told me last year that common bar soap was equally good, recently informed me he had lost by this insect three of his best trees.

The trees are not injured by this mode of treatment. My orchard is vigorous and healthy, and bore a handsome quantity last year; this year it has finely blossomed. I only wish the insect which mars the fruit could be as easily exterminated as the borer. NATHAN BRIGGS.

Marion, June 4, 1858.

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GUENON'S ESCUTCHEON.

I remember to have seen a publication explanatory of this infallible guide to the true character of milch cows. I doubted then, and have continued to doubt ever since, because I could trace no connection between the hair and the milking properties of the animal. I should as soon think of graduating the ability of a man, mental or physical, by the hair upon his lip, or the productive power of a farm by a professor's certificate of the quality of the soil, the only knowledge of which he had obtained by analyzing a few ounces, without ever seeing the farm. The public is so flooded with humbugs of this character, that it behoves them to be on their guard.

I remember to have heard an eminent lecturer say, a few years since, that he then had on hand more than *one hundred* parcels of soil waiting to be analyzed. Whether he ever found time, under his multiplied avocations and perigrinations, to attend to these applications, and furnish the promised certificates, I have no means of determining.

June, 1858.

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RAKES AND MILK.

I notice you have an inquiry from "N.," of Fitchburg, "Which is the best Rake?" In your remarks I notice you prefer the Delano. Now the rake that scarifies the ground the least, or that takes up the least quantity of drift, and raises the least amount of dust, or dry soil in particular, should be preferred, and my impressions were in favor of the old rotary rake; but I may be in error. This matter of raking is to be done quickly by the farmer, now-a-days, but what is the effect upon his stock? Dusty hay will give your cattle the heaves, wear out their teeth and disease their stomachs. Bottom drift, dirt and dust, are anything but nutriment, but sure promoters of disease. For choice farm stock, I would give odds for hay that is gathered by the ancient hand rake.

Our "swill milk" developments are unpleasant matters of contemplation. Only think of it—milk strained through a diseased cow! But the public stomach is by nature and practice a most endurable, unyielding machine. But by a more genial atmosphere than yours, our average of life is equal to that of your better regulated city. It would seem from your report that Massachusetts milk would be much improved if the cows were

shingled and the pump handles were cut off. Has it rained any of late? H. Poor.

New York, May, 1858.

Remarks.—The Delano or Independent Tooth Rake operates much like the Revolving Rake; it gathers very little that ought not to be gathered.

—

A SAVINGS BANK.

I should like to speak of my savings bank, and ask you to make any suggestions as to improvement in its management. It is not an incorporated institution, has no officers but a president, and his or her assistants, no salary to be paid, receives deposits at all hours, and of any quality which will contribute to the general fund; never refuses to discount at any time, both principal and interest; the interest per centum varies in proportion to the amount of deposits.

Now, you may ask, is it a paying institution? Yes, if well managed, for the president is of such a make, that he only requires his keeping for his services,—and throws in his carcass in 9 or 12 months to boot.

The deposits consist of various kinds of materials. 1. Good loam, sufficient to absorb all liquids. 2. The droppings of my cows, with the loam upon which they stand and void their liquid and solid manure, both summer and winter. And finally, every weed, straw, litter and all refuse vegetables not eaten by the cows or pigs. Now how shall I make it better, or more profitable?

Prospect Hill, 1858. Sponge.

Remarks.—A capital bank, that—its tendencies are exactly opposite to those of banks generally. Banks with salaried officers have a tendency to fasten mortgages on the farm, while such as yours are calculated to lift them off. If farmers would have nothing to do with money banks, and more with compost banks, their grass would be thicker and higher, their corn stouter and sounder, milch cows better, oxen stronger, their orchards and potato fields more prolific, and their families happier.

—

A COW THAT HOLDS BACK HER MILK.

Will you, or some of your numerous subscribers tell me through your columns what will stop a cow from holding up her milk? I have a three-year old heifer from whom at times it is impossible to get more than one-third of her milk; she has all the marks of a first-rate cow, gives rich milk, is an easy milker, and perfectly gentle.

W. B. Williams.

Chittenden, Vt., June, 1858.

Remarks.—Treat her gently always, and at milking time especially so, giving her a mess of meal, oats, or grass. Such are the remedies we have heard offered—we know of no other.

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WHAT WILL KILL HOUSELEEK?

A friend of mine wishes to know what will kill the high houseleek, as he has a piece of land that is almost overrun with it? E. W. King.

Charlton, June, 1858.

Remarks.—Who can tell?

CEMENT WATER PIPES.

A correspondent inquires in regard to cement pipes. Several years since, I laid a pipe procured of the Water and Gas Pipe Co., of Jersey City, New Jersey, and it has proved to be an excellent aqueduct. I gave a particular description of it a year or two since, in the columns of your paper, if I remember correctly. I think no pipe is so durable, and none so pure as this, unless it be block tin. At the outlet I attach a block tin pipe to the cement pipe in the bottom of the ditch. Stop cocks should be used at every branch in the bottom of the ditch and protected by a cement box. The pipe is made in pieces from 6 to 10 feet long, of tin or sheet iron, and then lined on the inside with cement. When it is laid, it is laid in cement, and a sheet iron sleeve 4 inches wide is put over the joints, and the space between the joints filled in with cement and then the sleeve is well covered with the same material. If made with good cement and laid below the frost, I don't see how it can ever fail. The Company send men to lay the pipes, and warrant the work. It is well to have a stop-cock near the spring to shut off the water for repairs.

David Lyman.

Middlefield, Conn., June 10, 1858.

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WEATHER IN VERMONT—WOOL.

We had rain almost every day from the 10th of May up to the 25th; then dry, up to the 5th of this month: since last date, it has rained each day to this date, and is raining now. We have had quite a full blossom for fruit; grass looks quite well for a good crop of hay. I think our plowing was mostly done near three weeks earlier than in 1857. We have not had very warm weather, as yet, nor have we had it very cool,—on the whole, crops bid fair to give us another blessing at harvest time. I think there was not more than one-fifth of maple sugar made this season, as compared with last year, in this part of our State. Our heaviest shearing flocks of sheep have been shorn, and the wool sold in the dirt and oil, at 25 cts. per pound, which, I think, is fully equal to 40 cts. if cleansed, as the sheep have been housed and fed grain, and most of them oiled since the clipping of 1857. Farmers in this vicinity expect to get from 34 to 40 cents per pound for our cleansed wool.

W. F. Goodrich.

Middlebury, Vt., June 8, 1858.

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TO DESTROY VERMIN AND BORERS.

Apply spirits turpentine. You will need to wet the branch or limb both above and below the nest, then wet the nest well with the turpentine, and life will soon be extinct. It is sure. For borers put it round the tree near to the ground. It will not injure the tree in the least. It will destroy the egg as well as the worm.

Lempster, N. H., June 10, 1858. L. Smith.

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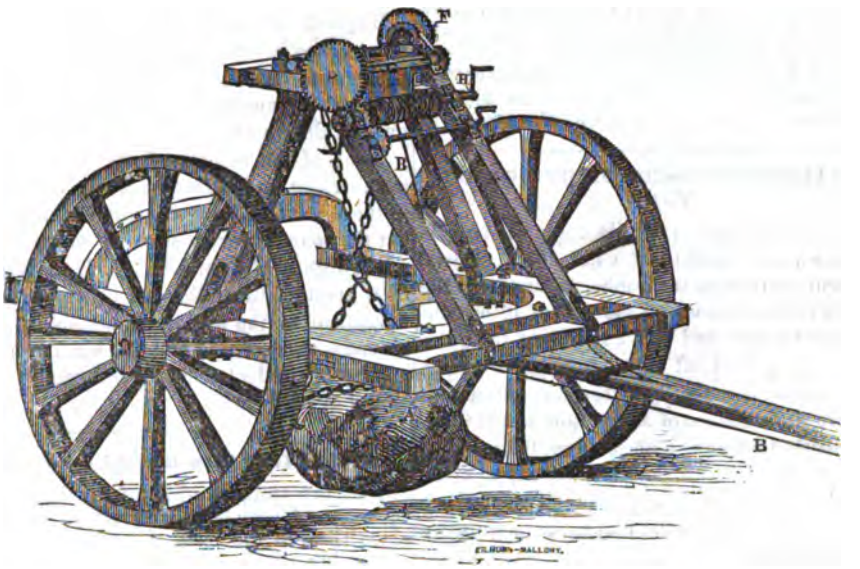
SEED OF THE WHITE PINE.

Friend Kenrick, of South Orleans, may obtain seed of the white pine by applying to B. F. Cutter, Esq., seedsman, florist and gardener, Lowell, Mass. Please have *a pair of those whales harnessed* by the time we get along that way!



BOLES' PATENT STONE-DIGGER AND WALL-LAYER.

A, is the rock just raised above grouud. F. the windlass. G, the connecting wheels between the windlass and crank-shaft H. H, the crank-shaft, with drum, secured to or detached from the shaft at pleasure. B B, the hoisting-rope, wound on the drum or crank-shaft H, and runs under a roller and through a shreeve near the end of the tongue, to which a horse is attached to hoist the rock. The small crank and shaft under crank-shaft H, is to wind up the rope when the rock is hoisted high enough and the horse is detached. The proprietors of this machine and patent right claim, that it is one of the greatest labor-saving improvements of the age. It will take rocks out of the earth of five tons weight or less, without digging to relieve them, with great ease and rapidity, and move them into the line for a wall, if desired, and place smaller ones on top until the wall is five feet high. The machine may be operated by men or by horse-power. The united power of two men will lift a rock of five tons weight from the ground in ten minutes, or it may be done by a horse in one minute. The proprietor has many certificates from practical men showing the efficacy of his machine. For further particulars address Thomas Ellis, Rochester, Mass.

To Preserve Ham through the Summer.—Make a number of cotton bags, a little larger than your hams: after the hams are well smoked, place them in the bags; then get the very best kind of sweet well-made hay, cut it with a knife, and with your hands press it well around the hams in the bag; tie the bags with good strings, put on a card of the year to show their age, and hang them up in the garret or some dry room, and they will hang five years, and will be better for boiling than on the day you hung them up. this method costs but little, as the bags will last forty years. No flies or bugs will trouble the hams if the hay is well pressed around them; the sweating of the hams will be taken up by the hay and the hay will impart a fine flavor to the hams. The hams should be treated in this manner before the warm weather sets in.—*Southern Farmer.*

THE HORSE NOT ORIGINALLY IMPORTED FROM THE EAST.

It is well known to our readers that Professor Holmes, of the College of Charleston, has been for many years engaged in exploring the fossil beds of Ashley river. A large number of interesting relics have been collected, and the savans of Europe and America have expressed their great satisfaction at the results of these explorations. Professor Agassiz in a lecture some time since, just after a visit to the Ashley with Professor H., said, "it was the greatest depository of fossil remains he had ever seen." Professor Tuomey called it "the great shark sepulchre of America," and now Professor Leidy, the distinguished American anatomist, has prepared a valuable paper on the remains of the horse and other animals, found fossil on the Ashley, which had been placed in his hands for examination by Profesor Holmes; and it will appear, from the short extract we make, that the investigation now

being made in this department of natural science are developing some curious things. Professor Leidy writes:—"In regard to the remains of the horse, from the facts stated in the account given of them in the succeeding pages, I think it will be conceded that this animal inhabited the United States during the post-pleiocene period, cotemporarily with the mastodon, megloanyx and the great, broad-fronted bison."—*Ch. Mercury.*

MASSACHUSETTS SCHOOL OF AGRICULTURE.

The first publication of this corporate body is before us, and consists of a list of its officers, and their address to the public, setting forth the objects of the School, of the act of incorporation, the by-laws, and the business of the quarterly meeting in April last. It appears by the Address that the object of this institution is to improve the condition of Agriculture in the Commonwealth, that some associated centre, guarded by the solemn forms of law, is necessary to make a suitable depository for any bequests which those who are able and generous may make to subserve this noble cause.

"It is intended," the Trustees say, "that the school shall bear the same relation to the farming interest of Massachusetts, which the West Point Academy sustains to the military interests of the nation, viz.: that of a thoroughly practical, preparatory school, where sound theory and intelligent practice may be so blended and harmonized, as to be inseparably connected in the minds of those who have faithfully gone through with the prescribed course of discipline."

We have plenty of men in our community who have abundant means to establish such a school as is contemplated by this association, and who may embalm their memory in the hearts of our people by such munificence, and at the same time greatly promote the interests not only of our citizens, but of the country generally. We cannot but hope, therefore, that ample endowments will soon justify the establishment of such a school, and do not doubt that its walls would soon be crowded with earnest and sincere inquirers into the mysteries which now envelop nearly every department of terra or horticulture.

We observe that men of wisdom and experience, and men entitled to public confidence, stand as guardians and trustees of the interests of the school, and they are men who will give it that popularity when it is once founded which it must possess to bring it into public favor.

The Trustees close their brief address by saying that "they have no endowment from the State. In their opinion, the object appeals to the patriotism and philanthropy of the citizens of our Commonwealth; and it is hoped that the appeal will be liberally met." Donations may be sent to the Treasurer, RICHARD S. FAY, Esq., 13 Exchange Street, Boston, who will acknowledge the receipt of them.

Bequests should be to "*The Trustees of the Massachusetts School of Agriculture,*" and may be general, or may be limited to any purpose within the scope of the institution, as the testator may designate.

Some of the readers of the *Farmer* may remember that we foreshadowed a plan of this kind, in these columns, several years ago, and pointed out the course whereby some of our monied men might dispose of a portion of their surplus means with great credit to themselves and with much advantage to the world. It affords us sincere pleasure, therefore, to find the work in progress and resting in the hands of gentlemen of decided ability and influence.

MEASURING THE HEIGHT OF TREES.

Take two straight sticks of *equal* length—any convenient length less than the length of the arm; place them in the form of a carpenter's square, preserving as nearly as possible a right angle, holding one stick in a horizontal and the other in a perpendicular position, and placing the end of the horizontal stick at the eye with the angle held in the hand extended directly in front. Then walk backwards from the tree to be measured, on ground as nearly level as the case admits of, until a line from the eye to the top of the perpendicular stick shall cut the top of the tree, and the distance from the observer to the tree will be the height of the tree above the level of the eye. The impossibility of keeping the sticks at an exact perpendicular and horizontal, is all that interferes with perfect accuracy—allowing the tree to stand in a perpendicular. The accuracy is sufficient for many practical purposes, and will often enable the woodsman to determine before he cuts a tree whether it will answer the purpose for which he intends it.—*Bath Organ.*

We think the wooden rectangle should be made with exactness before the measurer goes forth to his work, that he should attach a plummet to the instrument so as to secure perpendicular and horizontal lines,—and we suppose, also, the perpendicular half of the wooden "square," should point upwards.

WILD ONIONS.—California papers state that onions growing wild have been discovered in that State, an inch and a half in diameter, covered with a thick husk like the soap-root. They are palatable and even preferable to garden onions, and it is thought may prove a valuable addition to the cultivated varieties.

CURE FOR FELONS ON FINGERS.—The *Scientific American* says: "The past year we have known the spinal marrow of an ox or cow applied to three different persons with the most satisfactory results in relieving pain, and securing cures of their felons. The spinal marrow should be applied every four hours for two days."

COMPARATIVE VALUE OF DIFFERENT FERTILIZERS.

A gentleman having a desire to test the relative value of certain substances used as fertilizers, selected for the purpose a piece of upland soil, which had been carefully plowed the previous autumn. In May the ground was again plowed, but so lightly as not to turn up the sod, and well worked with the cultivator and harrow. Cattle were then allowed to have free access to the piece till June, remaining upon it during the night, together with one horse and about thirty sheep and their lambs, in all fifty-four head.

On the 17th of June it was again plowed and well harrowed, and subsequently marked off into drills. The whole piece was then divided by admeasurement into four equal parts, one of which was manured with common stable dung, and another with an extra quantity of compost, the base of which was vegetable matter in a state of complete decomposition; in both cases the manurial applications were spread over the drills, the seed sowed immediately, and the whole rolled. The other two sections were manured, one with two bushels of finely pulverized lime and three bushels of wood ashes—the other with two bushels of bone-dust.

At first the portions of the field which had been dressed with manure, took the lead, and seemed for some time likely to hold it. Care was taken to keep down all weeds, and retain the soil in a finely pulverized state by frequent workings. The turnips were not injured by the fly, and the weather being very favorable to the crop, all had a rapid and healthy growth, with the exception of the two sections first mentioned, on which the worm commonly known as the *turnip worm* depredated somewhat in the first part of the season, though not so extensively as seriously to injure the crops. Nearly fifty bushels of thinnings were taken out towards the close of July, and about the 15th of November, the entire crop was harvested. The result was as follows:—

Section No. 1, manured with animal excrements produced after the rate of 394 bushels per acre.

Section No. 2, dressed with compost, after the rate of 400 bushels.

Section No. 3, dressed with pulverised lime, after the rate of 500 bushels.

Section No. 4, dressed with *bone dust*, after the rate of 740 bushels.

In turnip culture, no article more valuable, he thought, could be used, than bone dust. It is moderately cheap, easily transported and applied, and produces results no less valuable than immediate. It furnishes, he thinks, all, or nearly all, the elementary principles involved in the system of the roots it is applied to nourish, and adds also several important and valuable principles of fertility to the soil. Lime is an excellent article, but a large proportion of it by weight, is insoluble, or not so immediately capable of adding its wealth to the soil, or yielding it to the crop. As a constitutional alterant, it is of considerable importance, however, and as a solvent of humus, it possesses great value.

For the New England Farmer.

TO DESTROY BUGS ON VINES.

Mr. Editor:—I noticed in the *Farmer* of June 5, an account of "A New Vine Protector," which seems to me to be a little more expensive, and to require more time to arrange and put away, when not required for use, than one invented and constructed by myself. I have used it for the last five years with perfect success, and it never has failed to perform its duty. I take an old flour barrel that is water-tight, and put in one bushel of hen manure, then fill the barrel about two-thirds full of soft water, stirring it well once in two or three days; set it in a sunny location, and at the end of two weeks it will be ready for use, although it would be better to stand five or six. When the bugs pay my vines a visit, I take a pail and with a swab made by tying a rag to a stick about 18 inches long I sprinkle the liquid over the leaves and upon the hill around the plants, putting to each hill about three table spoonfulls, and they invariably take leave. The application should be made about once a week; the liquid will also be beneficial to the vines. This protector comes within the reach of all farmers, and can be had without cost as no patent right is applied for. It can also be mixed in larger or smaller quantities, to suit each person. I have procured from a friend at Marblehead, some of the celebrated Hubbard squash seeds, and if they can stand what the bugs cannot, (my protector) I shall probably raise some fine squashes, as they are now up and looking well.

A constant reader of the *N. E. Farmer*,
Eliot, Me., 1858. B. H. Crane.

A NOVEL RAT TRAP.

Eds. Rural:—Having seen several inquiries in your valuable paper as to the best method of capturing or destroying the rat, I send you my recent novel and successful plan of performing the operation. Last summer I moved into my present abode, and was not long in discovering that we had rats in *quantum sufficit*. I tried several of the popular ways of alluring them into a steel trap, by means of delicate morsels, perfumes, &c., but succeeded in catching only two young ones, who, to use a common expression, had "stuck their foot in it." Early this winter my wife discovered a hole in the papers which covered a four gallon stone butter crock about one-third full of strained honey. It stood on the ground adjoining some cabbages which were piled higher than the top of the crock. Upon uncovering it she discovered a rat quite dead, and I proceeded to remove the carcass, under which I found two more. I consigned them to the manure heap,—and, act-

ing upon the suggestion, I replaced the trap to receive further patronage: The next morning I found two more. Repeated the operation of the preceding day, and on the third day I found but one. Since that time we have neither seen, heard, or been troubled with any more rats. They closed their career without acerbity, having retired from the busy scenes of their lives *sweetly*. Should any of your subscribers feel disposed to try the trap, I have no doubt that molasses would answer as well as honey.

Can any of your numerous readers give me any practical information in regard to the Dioscorea Batatas, or Chinese Potato; is there not considerable of Rohan about it?—John R. Simpson, *in Rural New-Yorker.*

PROGRESSIVE AGRICULTURE.

The *N. Y. Observer* says the following good things of progressive agriculture:

"Under its influence, spring up tasty and convenient dwellings, adorned with shrubs and flowers, and beautiful within with the smiles of happy wives, tidy children in the lap of thoughtful age—broad hearts, and acts as well as words of welcome. Progressive agriculture builds barns and puts gutters on them, builds stables for cattle and raises roots to feed them. It grafts wild apple trees by the meadow with pippins or greenings,—it sets out new orchards, and takes care of the old ones.

It drains low lands, cuts down bushes, buys a mower, house-tools and wagons, keeps good fences and practices soiling. It makes hens lay, chickens live, and prevents swine from rooting up meadows. Progressive agriculture keeps on hand plenty of dry fuel and brings in the oven-wood for the women. It plows deeply, sows plentifully, harrows evenly and prays for the blessing of Heaven. Finally, it subscribes for good religious, agricultural and family journals, and pays for them in advance, advocates free schools, and always takes something besides the family to the county fair.

LIMA BEANS.

For twenty years I have tried to raise Lima beans, but with poor success, failing at least during one half of the time to raise any. About seven years ago, B. Beman, Esq., of Mecca, informed me of his method of growing the Lima bean, and following his instructions, I have not failed since that time in raising a good crop.

In early spring I select a piece of rich, mellow soil, and setting my poles,—that are about six and a half feet long—about three feet apart each way, I plant three or more beans in each hill, being careful to set each bean with its germ downward. After they have grown awhile, and before they begin to run, I pull up all but the most vigorous plant, thus leaving but one plant to each pole. The plant is then carefully tied to the pole if necessary. When it has ascended to the top of the pole I pinch off its end and continue to do so to all the branches whenever they reach that height. This checks the liability to run to vines, and to make them blossom, bear sooner, and more abundantly than they otherwise would do.—Adam Griswold, *in Ohio Farmer.*

For the New England Farmer.

A STUMP MACHINE.

Mr. Editor:—I have on my farm a great many pine stumps, and if they could be taken out of the ground with the roots attached, they would make excellent fences. There are stump fences in this vicinity which have been built nearly forty years, and are as good as new; they have had no repairs, and will probably need none for forty years to come. To dig up pine stumps with a crowbar, hoe, spade and lever, is a tiresome and expensive operation, and when so extracted, they are unfit for fences, as they must of necessity be detached from the roots in digging. Some forty years ago, there was a stump machine, consisting of two wheels, an axle-tree and windlass attached, used in this town with very good success for a short time; but it required so much strength to lift the ugly thing, that the whole machine (though strongly built,) soon became worthless from wear and tear. Since which time very few pine stumps have left the soil of the fertile valley of Otter Creek, while many have been added thereto where once stood the stately pine.

Now, Mr. Editor, we would be willing to pay a good pile of shiners for a good durable stump lifter, one that will do the work *effectually*, and no humbug; or we are willing to pay well for the privilege of using another's invention, if a *valuable* one. At the first sight of your illustration of "Hall's Hand Power Stump Machine," in your paper of April 17, I thought it was *the very thing* so much needed in this pine stump region, and I *now* think it *may* be used with some success, and not knowing Mr. Hall's post office address, and as you have seen the thing yourself, I would like to inquire of you in relation to its construction, an answer to which inquiry *may* enable the readers of the *N. E. Farmer* to judge more correctly of the merits of Mr. Hall's invention than they can do by merely looking at the illustration. The beam or axle-tree around which the lifting chain winds must have great strength, or it would break in raising anything but *infant* stumps. Is it of iron or timber, and of what size is it? It must also be considerably elevated to raise the stump from the ground. How high is it above the bottom of the feet? What is the size of the posts? Of what material are they composed? What is the length and size of the levers? And are they timber or otherwise? The feet will be on the roots of the stumps if near each other, and for the machine to stand on the stump while attempting to raise it from the ground, would be like the man who lifted himself by the seat of his pantaloons. How far distant are the feet from each other? The feet must be long or they would settle into soft ground, and the machine would tip over, from the great weight it would have to sustain in raising large stumps. What is the length and size of the feet? Are the posts braced at the feet? The lifting chain on the old Pittsford Stump Machine used to weigh about three hundred pounds, and used to *break* sometimes. What is the size of the chain used by Mr. Hall?

Pittsford, Vermont. A Subscriber.

Remarks.—We cannot give the actual dimensions of Hall's Stump Machine without a good deal of measuring. "A Subscriber" can address

the proprietor, "*W. Hall, Brewer, Maine,* and learn all he desires to about the machine. If this is not stout enough, Wm. W. Willis, of Orange, Mass., has one that will pull anything out of the ground that ever grew in it.

TO PREVENT RATS UNDERMINING CELLAR WALLS.

The stability of cellar walls is sometimes seriously affected by rats digging underneath them and thus weakening the foundation. In order to prevent such injury, after the cellar walls are completed and pointed, you must dig a small trench inside of them, about one foot wide and half a foot deep. Now fill this trench nearly full of small stones and water-lime mortar; then cover the stones and mortar with the earth taken from the trench. If thus you guard the bottom of the walls, you will find all the efforts of rats at undermining to be utterly vain; they will have to go sneaking out at the very door or hole by which they entered. Some people say that rats from the outside dig down under the wall, and thus under the cellar; but this is a mistake. The fact is, they enter the cellar by the door or some hole; and then, if this entrance is closed against them, they dig a passage out under the wall. Such passage they cannot make if the inside trench is described, as they always begin to dig close to the bottom of the wall; and hence, when they encounter the stones and mortar, they are disheartened, and abandon the undertaking. If a plank close to the wall should lie on the cellar bottom, they will commence digging at the inside edge, although it be a foot or more from the wall. If a quantity of potatoes should be piled up in the middle of the cellar, the rats will begin to dig under the pile, or even under the bottom of the chimney, perhaps instinctively expecting thus to work their way out. But to guard against their digging operations cover your cellar-bottom with a thick coating of water-lime and sand, and the saucy depredators won't trouble you any more.—*Rural American.*

For the New England Farmer.

THE MILK TRADE.

The developments that have been made in some of our cities, in providing milk for the market, are completely astounding. That an occasional deficiency in the milk-man's cans should be supplied from the fountains of pure Cochituate, we can easily conceive. This is a cheat not unlike that of the grocer who waters his rum, under pretence that it will do less harm to those who use it; as was formerly done in some of our New England stores. But to undertake to pass the dregs of the still through the bodies of animals that have no chance to breathe the pure air of heaven, and to deal out such stuff, as milk fit to be used, is an offence the vilest scamp in creation would be ashamed to acknowledge. Language fails in characterizing its baseness. We are truly glad, Mr. Editor, that you have had the perseverance to ferret out, and the independence to expose these iniquities.

June 10, 1858.

For the New England Farmer.

COUNTY FAIRS.

DEAR SIR:—The returns of the times and places of holding the exhibitions of the county agricultural societies not having been received in season for publication in my last report, as usual, I take the liberty to inform you and the public that they have been officially made to me as follows:

Essex	Danvers. Sept. 29 and 30.
Middlesex	Concord, Sept 29.
Middlesex, North.	Lowell, Sept. 15, 16 and 17.
Middlesex, South.	Framingham, Sept. 21 and 22.
Worcester	Worcester, Oct. 6 and 7.
Worcester, West	Barre, Sept. 30.
Worcester, North	Fitchburg, Sept. 24.
Worcester, South	S'urbridge, Sept. 29.
Hampshire, Frank. and Hamp.	Northampton, Oct. 13 and 14.
Hampshire	Amherst, Oct. 12 and 13.
Hampden	Springfield, Sept. 28, 29 and 30.
Hampden, East	Palmer, Oct. 5 and 6.
Franklin	Greenfield, Oct. 6 and 7.
Berkshire	Pittsfield, Oct. 6, 7 and 8.
Housatonic	Great Barrington, Sept. 22, 23 and 24.
Norfolk	Dedham, Sept. 28 and 29.
Bristol	Taunton, Sept. 22 and 23.
Plymouth	Bridgewater, Sept. 29 and 30.
Barnstable	Barnstable, Oct. 6 and 7.
Nantucket	Nantucket, Oct. 13 and 14.

The Horse Show, at Springfield, under the auspices of the Hampden Agricultural Society, will be held Sept. 14, 15, 16 and 17.

Very truly, your obedient servant,

CHARLES L. FLINT,
Secretary of the Board of Agriculture.

Boston, June 11, 1858.

THE JEWS AND HOGS.

It was no doubt a good law among the Jews, preventing the eating of hog flesh. Because Judea is a warm climate, and highly *concentrated* food is there to be avoided *now* as well as then. Beef and fruits, and what may be called diluted food, is much better there. But I imagine it would be as poor policy for the Icelander to venture to live on bananas and plantains, as for the Indians of Central America to attempt raw walrus meat as a desert! Again, the Jews were eminently impulsive, under the influence of the passions and appetites, and it was not safe to allow them any latitude on so good a dish as good ham or stewed pig's head!

I am willing to admit that swine's flesh is not a good dish for a surfeit,—but moderately used, as all the good things of a good Providence ought to be, it is not more unhealthy than other flesh. Indeed, I regard *salt* pork as one of the most healthy of all meats, as experience in the army and navy, and in the fishing service, every day proves. But be all this as it may, the question of eating pork is a settled question beyond the reach of Jew or Gentile, and all will eat it who can—get it. A word, however, about the "diseased livers of hogs! A hog is omnivorous, and delights especially in roots and buried nuts, and in worms and grubs. Our would-be "scientific" farmers and philosophers who never farm, put the hog where all his natural habits are ignored without proper food or exercise, and then if the grunter follows the law of nature's penalties he is decried and slandered as being under the curse of God—when it is only the curse of foolish man!

—C. M. C., *in Ohio Farmer.*

For the New England Farmer.

AUTOCRATS OF THE HIGHWAY.

Mr. Brown:—You will gratify many of the readers of your widely circulated *Farmer*, by employing your editorial powers for the suspension of abuses, practised by persons annually "clothed in a little brief authority," who are called Road-Surveyors, and who declare war to the knife, pick and axe, against all the works of the Creator belonging to the vegetable world and coming within the range of their destructive powers. Indeed, their wanton ravages would seem incredible without proof, and I must give you a few instances. Within five miles of your home there is about half a mile of highway, leading to the railroad station, which, till a year ago last road-mending season, was most richly bordered on both sides by a living hedge-row of birches, elders, wild roses, profusely blooming, tall blackberry bushes loaded with fruit in their season, ground-nut-vines, ornamenting and perfuming the whole region, grape-vines, climbing wherever their tendrils could reach, and loaded with blossoms, fragrant as the mignonette, whose seeds are imported from France, or grapes, sweet and refreshing in their season, with many other living and growing ornaments of the earth, which the Creator's bountiful hand formed and placed there, for the service and delight of man.

At this shady and fragrant spot the sun-scorched traveller could pause and rest on his journey; children, on their way to school might set down their little dinner-pails for a few moments, to pick the ripe berries or gather a bouquet for their teacher; and here all who love the works of God better than the destruction caused by man, could send up their thanks to Him who made the world so beautiful!

But, Mr. Editor, last June, a year ago, the repairers came to this pleasant spot and began their devastations, right and left. One of the inhabitants, hearing what was going on, wrote a respectful note to the overseer, requesting him to spare as much of the shade as he could, consistently with his duties, as it was a great comfort to those who were obliged to walk to the depot. But still the destruction went on unflinchingly. Every birch, every vine, every fruitful shrub, every form of vegetable beauty, fresh from the hand of the bountiful Creator, was swept away. Nor could any plea be set up that this waste of God's gifts was for the improvement of the highway, for in no case were these trees and shrubs levelled with the ground, but still stand, their dead stumps a foot or two high, making the sides of the road as useless as they were before this havock. The ruins of the hedge-rows were tossed over the wall, upon the shrubs and vines on the other side, thus transforming both from rows of sweet and beautiful vegetation to heaps of rubbish and bristling dead stumps. A little farther toward Concord the road was shaded by a succession of young locust trees, rich in their bright and varied green, or loaded in their season, with sweet blossoms, from which the bees delighted to draw their stores; these, also, were destroyed, every one, and the spot where they waved and blossomed is bare and desolate. Still nearer Concord, was a thick hedge-row of such plants as delight in a moist, alluvial soil; they grew and bloomed and gave out their odors, sheltering the traveller from the sun, and protecting him from the cold blasts which sweep over the level plains. They were all destroyed—not only cut down but burned, lest their roots might spring up again; and the fire has also killed all the young elms and other trees near the spot, leaving the road bare and destitute of shade, as if it ran through the deserts of Sahara. In another part of the same town, the side of the road for some distance was ornamented with wild roses, which, finding the soil congenial, grew uncommonly tall and prolific; the roses were very large, abundant and fragrant, making the spot so inviting that persons directed their drivers that way, for their sake, but the road-surveyors had all the stones which were collected in their improving process tipped upon this bed of roses and it is extinguished; instead of it we see a long heap of loose stones and rubbish.

Now, Mr. Editor, you can do much toward putting down this disgraceful abuse of power. Tell the readers of your valuable magazine, that there is profit in every thing which is made by our good Father in Heaven. The wild roses are good to make conserves for colds and rose-water for cooking and sore eyes. It will always sell. The elder-flowers are good for babies, and the berries make good wine and syrup. High-bush blackberries will bring a good price, and so will other berries. Wild grapes will meet a ready market among the wine-makers, or will sell well to housewives who wish to make jelly, and birch trees are good for them to climb on, so that the grapes may come to the sun, but dead stumps and heaps of stone and dirt by the roadside will never make them or their children richer or better.

Hoping, sir, you will speak to some purpose, to these destroyers, before they commence their ravages this year, I remain with much respect,

A Reader of the Farmer.

Remarks.—The autocrats of the highway have not got through yet, we observe, with *mending* the ways which were made dangerous by spring frosts and floods. We are not surprised at the complaints of our correspondent. Many of these road-makers are utterly incompetent to discharge the duties assigned them. Road-making is a science that requires observation and study, and includes some important principles. We can point to a piece of road to-day, where money has been liberally expended for more than a dozen years without effecting any good results, from a want of the application of the true principles of drainage alone! It is preposterous to think of improving a road by covering up the gushing springs or water-courses which underlie it—they must be cut off and led away from the road, and then it becomes dry and compact. The mere moving of gravel from one point to another will seldom make a good road, alone. These autocrats flatter themselves that they act under the shield of the law. But does the law sanction such ravages as our correspondent describes, or

the excavation of a neighbor's door-yard, so as to endanger life and limb when he goes forth to the highway, or undermine his fences, or do any thing that shall incommode any one or mar the general beauty of the landscape?

Towns should be more considerate in the selection of their agents to do the necessary and important work of repairing the roads. Constant feuds and great hostility of feeling annually grow out of the unnecessary depredations of highway-surveyors.

For the New England Farmer.

SHINGLES AND NAILS.

MR. EDITOR:—An article appeared in your paper of the 6th of March last, where a writer attributes the rusting of nails to "sawed shingles," and goes on to say, (speaking of another person) "but by a little investigation he will without doubt find it attributable to their contact with salt water;" he then adds, "it is believed that the complaints of shingles rusting the nails is mostly confined to the sea-board towns and eastern shingles." Now salt and iron, we all know, do not agree very well, but there are some other causes which should be taken into account.

1. By experience I have found that nails made of poor or cast "puddled" iron will sometimes rust off in seven years with sawed or rift shingles, but generally perish soonest in the former.

2. The nailing of sawed shingles the grain "wrong side up." They should be laid so as to carry the water out of the pores instead of into the wood.

3. Using a slender, light nail, well known by carpenters who work by the job and find the materials. The undersigned shingled a house in 1833 with sawed cedar shingles, and with red chalk marked every one with a cross for "this side up;" it did not want recovering until 1857—24 years. He shingled another in 1840, in the same manner, and it was in good order in 1856. This last was the "Old Cole White House," (well known here,) which was partly removed and the rest demolished this year; this gave a chance to examine both shingles and nails. The former were in good order and the latter were "as good as new," as far as the carpenter and myself could discover. I will here mention that these nails were rolled and cut from old sable iron by one of your citizens, Jarvis Danforth, Esq., at 6 cts. per lb., or one cent extra; the price of common ones being 5 cts., as the price was then. I would recommend using the same material, or its equivalent, as a matter of economy for the owners of buildings, especially if the shingles are clear of sap, or nearly so. With this I send a shingle with a nail placed on a house in this place in 1785; one of our oldest townsmen, Capt. Job Godfrey, informs me that he remembered when they were put on, and in that age nearly all the shingles used came from the "Great Swamp," and all "heart stuff," which appeared to be the case. The house last spoken of was stripped in April last, and the shingle and nail came from the wall; the roof had been repaired since it was built. JONATHAN HODGES.

Taunton, 1858.

For the New England Farmer.

CROWS.

Many of the ancient nations worshipped all the offensive creatures they could find, placing highest in the calendar those most loathsome and harmful. I suppose it is on the same principle that the crow has lately been commended in various periodicals to our regards as a very harmless and useful bird. I am no ornithologist, and am less acquainted with the habits of the bird in question than are others, but certain facts respecting it I suppose are well established.

1. It inclines to prey upon the cornfields in the spring, and can be kept off only by great care and trouble. Our practical farmers assure us that the loss occasioned by its depredations is often severe. They also not unfrequently damage seriously potato fields in the spring by scratching open the hills.

2. They destroy vast multitudes of the smaller birds. There is nothing for which they have so keen an appetite as the eggs and young of our singing birds. Last June a robin's nest, in a maple standing within two rods of my house, was robbed by a crow, and I caught them afterwards doing the same thing in the apple trees that stand close to the house. You may see them not unfrequently flying from tree to tree through an orchard, hunting their prey on each limb. All "the unmannerly fowlers" put together do not destroy a tenth part of the singing birds that are annually consumed by this black monster.

And what services do his advocates plead in arrest of judgment for these crimes? Why, he sometimes removes offal that the lazy owner has failed to cover up for the benefit of his lands. Still further, they may be seen in the spring and fall, (in the summer while the birds are nesting they are above such business,) in our pastures and meadows at a safe distance from the house, and usually on the most worthless land, picking worms from the earth, which some conjecture are hurtful to the grass. The gardens and highly cultivated fields about our dwellings, they never approach unless to murder a nest of singing birds. For these very doubtful benefits it is proposed to let them live, when the life of each one involves the destruction of scores of singing birds every season, birds whose presence and whose music form so great an attraction to our country houses, and whose usefulness in our gardens and orchards no one will for a moment question. They were undoubtedly made for some desirable end, as were hundreds of squash bugs and borers, and so on. The great end they all seem to us to answer is in the exercise of our patience, while they live, and in the practice of our skill to destroy them. It is long since I have found it in my heart to shoot a partridge or squirrel, the beautiful occupants of our fields and forest are worth more alive than dead, but for border ruffians I have no pity. JUSTICE.

Groton, 1858.

TREATMENT OF HENS.—Two flocks of hens were compared. One laid eggs almost all the time; the other laid scarcely any. On examining their treatment, the following differences were found to exist; the former had a warm cellar to

roost in during the winter; the latter roosted in a stable where the wind blew in. The former had a fine place in an open cellar for scratching among ashes, lime and earth; the latter scratched in the manure heap, or in the stable when the cows were put out. The former had plenty of good water, with milk, etc., the others had no drink except what they could find.—*Prairie Farmer.*

For the New England Farmer.

CULTURE OF FOREST TREES.

The Legislature of Massachusetts made it a condition precedent, in granting funds to agricultural societies, that something should be done to encourage the growth of forest trees. Accordingly we find more or less of these premiums offered by all of the societies. But we have looked in vain for the award of such premiums, and more for the forests, the growth of which was encouraged by such offers.

These reflections were brought to mind on a recent visit to the grounds of Mr. FAY, of Lynn, where are growing many thousand of the Scotch Larch, the English Oak, and other trees of like character, all of which were imported and planted by him, about ten years since. I never witnessed any growth that awakened my admiration more. Notwithstanding the injuries sustained by fires, and other wanton encroachments, the whole region about the beautiful sheet of water long known as Spring Pond, whose waters supply the city of Salem with the elixer of life, is made beautiful by their verdure. On many of the larch trees, I witnessed a growth of *two feet* in extent, the present season, and some of them have already risen to a height of *thirty feet.* I forbear to say more, as nothing short of an actual view, will afford an adequate idea, of what can be done by the application of scientific culture, even in a forest, on a forbidding soil.

I was assured by the proprietor, that the probable value of the timber on these grounds, if its growth could go on unimpeded, for thirty years, would be not less than $300 an acre. He said he had visited an estate in Scotland, where there grew, within the life of the owner, from his own planting, timber enough of the Scotch larch variety, to build one of the largest ships in the British Navy. What better service could a man do for his country? If we had more men like Mr. Fay, we should never be in want of Essex frigates, to sustain the honor and glory of our noble country.

June 18, 1858.

IMPORTATION OF PURE ARABIAN BLOOD HORSES.

We were shown six head of pure Arabian blood stallions, brought to this city by Captain Lane, late of the combined American and English companies engaged in raising the sunken vessels of war in the harbor of Sevastopol. These noble animals are direct from the Czar's cavalry stables, and were raised expressly for the Imperial stud. These stables are the wonder and astonishment of all who have obtained admission to them. The inclosure of stone walls and iron frames covers an area of ten miles in length by five in width. The stables are twelve feet square each, while in the centre of this vast building is an arena where an army of 5,000 head of the finest horses in the world are broke, trained and exercised daily by another army of the most skilful trainers, jockies, &c., in the Emperor's dominions. By an imperial decree, sales are permitted to be made when a certain number of animals are in the stables, of which Captain Lane has taken advantage, as of the advantage of his relations with the Government—thus making an invaluable addition to the American stud, for which he deserves, and will doubtless receive the thanks of the country at large. They cost $18,000, which was much below their value, and are pairs of grey, dark bay and black. They are stabled at Tattersall's, Thirty-ninth Street and Sixth Avenue, where all who wish to see these matchless creatures will no doubt have every facility afforded by the courteous proprietor. They stand about fifteen hands high, and exhibit all the fine points to be expected from their descent. —*N. Y. Post.*

For the New England Farmer.

FOOD AND HABITS OF THE ROBIN.

MR. EDITOR:—The report of the food and habits of the robin, so far as published by you, for the months of January, February and March, drawn up by J. W. P. JENKS, Esq, of Middleboro', one of the committee appointed by the Massachusetts Horticultural Society, strikes me with much surprise. Mr. Jenks says, the fourth fact. "To the present date I have not discovered the first particle of vegetable matter in the crop of a single bird." Now this would lead us to infer, without other testimony, that the robin at this season of the year, and for two months past, having first made its appearance the first of March in the latitude of Massachusetts, subsists wholly on insects, grasshoppers, spiders and the larvæ belonging to the curculio family.

I was teaching school in St. Mary's County, Md., during the years 1843 to 1848, inclusive, and I was curious to observe the difference of time that the robin and other birds made their appearance in their migration from south to north. The robin made its first appearance in Maryland, generally about the last week in February. Sometimes as late as the first week in March, and often they would retreat south to be gone a week, or till the weather became mild again. They often came in flocks, numbering many thousands, covering large fields, or acres, which I never observed in the latitude of New Hampshire or Vermont, in my boyhood days. Now there is a tree quite common in the forest in Maryland, an evergreen called the Holly; this tree is usually loaded with a berry or fruit about the size of a marrow fat pea, as red as a cherry, and it remains on the tree, (a beautiful sight) till the robins make their appearance, and during the short time, say two weeks, the robins remain during their migration, they strip these Holly trees of every berry to be seen. They are as ravenous as locusts. Now, provided there was a fruit, or berry in Massachusetts, like the Holly, or were cherries ripe at their first coming, undoubtedly they would spend little time in hunting after such small fry as Mr. Jenks reports only to be found in their crops. I used to think that the

Holly was planted by Providence especially for the food of the robin, and its fruit left on the tree during the winter, to sustain these birds at a time when comparatively few of the insect world were abroad. CHARLES S. WELD.

Greenbush, Maine, 1858.

MARKET GARDENS.

The bare mention of a kitchen-garden will suffice to one enthusiastic writer for an allusion to the wars of the Red and White Roses. In the mind of another, pot-herbs are associated with all the glories of Oriental fiction; for did not the renowned Caliph Haroun Al Raschid teach his trusty and well-beloved brother, the Emperor Charlemagne, (to whom he was personally known, and was perhaps no more a hero than King George the Third to his valet-de-chambre,) the value of pot-herbs generally, and how to cultivate them? Turnips suggest Charles Townshend, King George the First's foreign secretary, called Turnip Townshend by the foolish wits about Court, because he noted the mode of cultivating that vegetable in Hanover, when attending the king on an excursion thither, and afterwards induced his countrymen to adopt it. The annual value of the turnips chiefly grown on stony lands or on lands exhausted by previous crops in England, which but for Townshend's efforts would have lain fallow, or remained totally uncultivated, is now estimated at fourteen millions sterling. Surely here was a benefactor to the human race whose monument history has raised, by calling him "Turnip Townshend."

It is worth remarking that very few of those vegetables which are now so common among us, are natives of these isles. The potato—still a valuable servant, though much broken up in constitution of late years—comes, as every one knows, from America. The common pea is supposed to be only strictly at home in Syria. Beans are from Egypt or Persia. Onions, in all their varieties, are also from the East. Even the leek the Welchman has no right to stick in his hat as a national emblem; the same being a native of Switzerland. The Cos lettuce ought to be a native of the island of Cos. Cauliflowers and garden cress are from Cyprus; spinach from Western Asia; endive from Japan; radishes from China; rhubarb from Tartary; artichokes from the shores of the Mediterranean. Jerusalem artichokes are not from Jerusalem, but from South America, the word Jerusalem being a mere corruption arising from an accidental resemblance in sound between that word and their Spanish name. Turnips and carrots are found wild here; but experiments have proved that cultivation could not have converted the native variety into that which we are accustomed to eat. The Flemish refugees in Queen Elizabeth's time brought the carrot with them, and planted it first at Sandwich. The turnip probably found its way hither by the same means. There is a tombstone to be seen still, I believe, in the church-yard of Wimbourne St. Giles,' in Dorsetshire, erected to the introducer of cabbages, with a representation of a cabbage carved in stone at the foot. Potatoes are for ever associated with Sir Walter Raleigh, since whose time they have achieved their extraordinary revolution in the kitchen-garden. Mr. Myatt, of Deptford, who first cultivated rhubarb for the market, is, I think, still living. Only forty years ago he first sent five bunches of this vegetable to the Borough Market; of which he prevailed upon some one to purchase three by way of experiment. The other two he brought back unsold.

This is as much as I can tell the reader about vegetables on my walk from the station to Mr. Trench's house. Mr. Trench (whose modesty prefers that pseudonym, and who would not be made famous on any account) is quite a model market-gardener. There are members of his profession who have nothing to tell about it, except that it is a ruinous business, to which they have moodily resigned themselves with the determination of losing their capital and bringing themselves and families to the work-house. Some of them have been pursuing this reckless course all their lives, and are bringing up their sons to achieve the work of destruction. They are philanthropically anxious not to tell the world any thing about it. Perhaps they are right, and dread competition. A recital of the sufferings and privations of Robinson Crusoe has induced many a boy to go to sea. Who knows what might be the result of the most faithful picture of their laborious life, and continual losses? My market-gardener, however, is not one of these; he knows how to manage things well enough to get a comfortable income out of his capital and industry; and he does not think of making a secret that a comfortable income is to be made by such means. The table in Mr. Trench's cool and shady sitting-room is bestrown with letters and papers; books lie about there every where; and portraits ornament the walls, as well as one or two testimonials from certain societies, framed and glazed. A fresh smell of mould and flowers comes through the window from the green-house, and lingers in the room. Cowper might have written his Task here; and I, who am by no means poetical, feel as if I could sit down in that worn arm-chair, and while the linnet in his cage at the window chirps and pecks and drops his seed-husks on the floor, could indite something to my mistress' eye-brow, above that mediocrity which the gods abhor.

Mr. Trench offers to walk with me through his hundred acres of ground, warning me not to expect to find any thing very exciting in market-gardening. I reply, that I am not in search of excitement; but only desirous of seeing with my own eyes something of the routine of those operations, of whose magical result I have heard so often. My modest friend is as anxious to repudiate the employment of magic as if King James were still upon the throne, and Matthew Hopkins a neighbor of his; and further reminds me, that only a very small part of that routine can be seen at one time, and that to understand market-gardening it would be necessary to remain there a whole year, going progressively through the Gardener's Calendar. All these objections (which I listen to as I would to the good housewife's depreciation of her own Christmas pudding,) being got over, we go into a field of cabbages, through the green-house again, and across a clean yard paved with pebbles, where men are stacking cabbages in a wagon, apparently with the ambition of the builders of Babel; and through a row

of sheds, where men and women are washing and tying vegetables in bundles.

"Nothing very remarkable in a field of cabbages," says my conductor.

"Very large and healthy-looking." I note the blue bloom upon them, and the glistening drops of dew collected in the wrinkles of their leaves.

"Of course," replies my conductor. "Before this ground was planted, you see, every bit was dug up two spades deep. We never have a plow here. Then it was thoroughly manured—a good horseload to every thirty square feet of ground."

"Rather expensive."

"Why, we put as much as twelve pounds' worth of manure to a single acre. Supposing my land could be all clear, and I wanted to plant the whole of it with cabbages, I must pay twelve hundred pounds down for manure to begin with; without considering the cost of digging, and attending to the crop till it comes to maturity, gathering, taking to market, &c."

"And rent," I suggest.

"Nine pounds a year for every acre," says my friend, "besides ten shillings for tithes which the church is none the better for."

"How many of those plants are produced on an acre of ground?"

"Nothing easier than to calculate. You see they are all at exactly equal distances. The plants are twenty inches apart, and the rows eighteen inches. That's the distance they grow best at." My conductor takes out a rule and proves the correctness of this to a nicety, which convinces me that there is no slovenliness in his ground. "That 'll give," he continues—with a promptitude which makes me suspect that he must have been once a calculating boy—"that 'll give seventeen thousand cabbages to an acre. I could grow near upon a couple of millions at once, if I chose."

I indulge involuntarily in Dominie Sampson's favorite exclamation; and ask, "What those women yonder are raking about for?"

"Hoeing out the weeds. Every weed or blade of grass that could steal a grain of nourishment from the ground is cut down as fast as it appears; our plan is to keep all employed, ground, men and horses. This piece of ground, for example, we shall begin to plant again the moment a portion of it is cleared."

"What will be the next crop?

"I don't know. Whatever is ready for planting."

"But," I ask, "what is that 'succession of crops' which I have always believed so necessary, unless you follow the old plan of letting the land lie fallow? What is the 'four-course system of husbandry,' which some farmers are tied down by their leases to follow?"

"Nothing to do with us," replies my friend, smiling; "nor with farmers either, if they knew it. Those chaps who don't put a bit of manure upon their land for years, are obliged to vary their crops; for, you see, a plant with its roots takes its own kind of nourishment from the ground, just as a chemist extracts one or two components from any substance, and leaves the rest. When wheat has had its feed, the farmer knows it is of no use to sow wheat again. He plants tares, which extract something of what the wheat has left; next turnips, and so on. Now we supply our soil artificially with what the next crop requires, and so can grow any thing. Thus we get first-rate crops, and three or even four of some things in a year, whereas the farmer will seldom get more than a single crop."

Passing through a little patch of well pruned fruit-trees, I observe that every bit of ground beneath is planted with another kind of cabbage—coleworts or "collards," as a laborer calls them. "No space lost here," says my conductor. "These little plants, which perhaps you might take for weeds, growing in this narrow strip of ground, between the gooseberry bushes and the path, are broccoli. While they are so young they can find nourishment enough here—thick as they are. They will be thinned and planted out in the fields, very soon. Here is a patch of ground, you see, already planted with them."

"I suppose these weeds among them do no harm while the plant is so young."

"May be weeds there wouldn't hurt them now; for there is more nourishment in the ground than they want, planted at that distance apart. But if weeds wouldn't hurt them, we say something more useful wouldn't hurt them. This is not a weed; it is celery. They can grow very well together, till the broccoli gets bigger, and wants all the strength of the soil to itself; then we shall remove the celery."

"You take advantage of everything."

"Must do so, in these Free-trade days," says my companion, sitting down upon a hand-barrow, and rubbing the perspiration from his forehead with a pocket-handkerchief. "If we couldn't beat our neighbors in a fair trial, we wouldn't be so shabby as to ask the Government to help us; that's how I look at it. But Free-trade puts us all upon our mettle; Belgium and the South of France have sent some first-rate things to our markets this year. What do I care? I set about it and grow as good." Mr. Trench paused. "It don't do," he added, thoughtfully, "to waste as much as a leaf or a root that would go into the manure heap, I assure you. There is my neighbor, Mr. Kutch, who has been in the East Indies. He is a man of property, and it is his whim to turn market-gardener. He makes up his books every year and finds himself just a hundred pounds out of pocket. And why? Because he's not on the ground himself, as we are, from morning till night; and doesn't take such care to prevent waste."

"This thin green down, with patches of white, here and there, as if some workmen from the lime-kilns had been trespassing in it, is onions, I suppose?"

"One kind of onions. A very different sort from those with the great seed-pods at the top. It is of no use my troubling you with the various names of our things. Some have no end of varieties, chiefly named after the gardeners who have imported or produced them. Fruit-trees, as you know, change their very nature by cultivation—as for instance, the peach, whose fruit in a wild state is poisonous. So plants by cultivation change in quality, form, and color."

"Though never their primary structure," I interrupt.

"Quite right. Now, in the rivalry going on among market-gardeners and nursery-men, constantly experimenting too as they are, infinite va-

rieties of every thing grown are necessarily produced."

"You will of course choose the best."

"Some kinds are equally good. Others are known for certain qualities, for which we choose them as we want them. Some are by their nature fit for earlier or later growing than others; and as our object is to keep the markets supplied, we grow several sorts of most things. In this way we have various crops of the same vegetable, which we know will come due every week while the season lasts."

Walking on through other gardens, all planted with the same regularity and neatness, we notice in every patch one or two laborers, chiefly women. Some are hoeing among crops so fine and thickly sown that it is a marvel how the greatest care can prevent their cutting them down with the weeds. Others are propping bell-shaped and square glass-lights with bits of wood, to let the air in to the plants beneath. Some men are perseveringly watering, one by one, tomatoes, or love-apple plants, against a wall. Others in deep alleys, among rows of beds, as regular as a ground plan of the city of Philadelphia, are carefully picking weeds with the hand; while a few, I see on coming nearer, are cutting asparagus. Wherever a blue top has just forced its way through the mould, a woman thrusts in, sideways, a long steel instrument, notched at the end, and saws at the stem some inches under the ground. The notched cutter, I am told, leaves a ragged surface where the stem is severed, which heals more readily than a smooth cut—the mould staunching the sap more completely, and preventing it from bleeding. These asparagus roots have been three years in the ground, and have only yielded shoots strong enough to bear cutting this year—though the soil is of course occupied by other crops during that time. The shoots grow rapidly in the season, and are cut every other day for five weeks. The "grass" is removed to the yard in baskets as fast as it is cut, to be washed and tied in bundles for the market. I learn that the long, hard, white stem—which the eater rejects for its earthy and watery flavor—is produced by earthing the shoots, or "blanching," which is a mere waste for the sake of appearance. By simply removing some of the mould the shoots would grow up with five or six inches of eatable top, instead of that half inch of purple sprout, which would tantalize anybody but that morbidly carnivorous lady in the Arabian Nights. So long, however, as the public prefer the purple tip and tasteless stem, and the green-grocer refuses to buy a wholesomer kind, the market-gardener is compelled to earth up, and blanch, and make pretty looking bundles. Some laborers are sprinkling lime-dust here and there, which I take to be manure; but my friend corrects me.

"The only remedy for slugs. A dust of lime when the dew is on, spreads all over leaves, and kills everything without injuring the plants. These insects puzzle us. Look at the scarlet beans just coming up, and all eaten away." While I am looking at them, my conductor pulls out a microscope in a brass tube, and begins to inspect a leaf minutely. "We have been watching this," he continues—screwing up one eye, and wrinkling his forehead like a Scotch kale—"We have been watching this for a week past, and can't find what it is. There is a disease among cabbages called 'clubbing,' which looks like the ravages of insects; but it come from over-manuring; for you may manure too much. Some say the disease in the potatoes and cucumbers, as well as in several other vegetables lately, is from the same cause."

"Are you much troubled with vermin?"

"Well, we keep a sharp look-out to burn or fumigate them before they've time to spread. Field mice eat our seeds. We take care to frighten all birds away with scarecrows, but I doubt whether we don't do more harm than good, by preventing the birds from eating the insects, with which we are always more troubled than farmers are. I am tempted to make a bonfire of all our Guy Fawkeses one day. A friend of mine keeps young bantams, who peck up worms and slugs like barleycorns; they scratched a good deal among the crops, at first; but he got over that by putting their feet in socks."

A bantam with his feet in socks is so difficult to imagine, that I am suspicious that my friend is mystifying; but I find him quite serious. "This little insect that rolls itself into a perfect black ball as soon as you touch it," he continues, "is one of our most troublesome visitors. A wood-louse will eat anything, sweet, sour, or bitter. They can't have any sense of taste; or if they have, it is the reverse of ours. They will greedily devour a leaf, that, to us, has the most nauseous flavor imaginable. I have seen three young bantams peck up a hundred of these in two minutes by the watch. Our plan for killing them in the green-house and cucumber frames is with toads."

"Toads!"

"Toads. We buy toads; I have paid as much as six shillings a dozen for toads."

There is considerable bustle in an adjoining field, where a number of women are pulling gigantic rhubarb stalks, and loading barrows. I observe a considerable difference in the rapidity with which some do their work; and my conductor confirms my observation. "That young Irish woman, yonder," he says, "with her gown pinned up behind, and her bare arms, as brown as mahogany, will get through twice as much work in a day as some of our people. We give her two shillings a day; most of them get only a shilling or eighteen pence. How are you, Molly?"

"Very well, sir, thank you," (without pausing in her work.)

"Here's the shilling I promised you three women." Molly protests she "never thought he meant it;" but constitutes herself, at once, a trustee for the other two; and deposits the shilling in a large, heart-shaped pocket, hanging at her side.

"How old are you, Molly?"

"Thirty, sir."

"Married?"

"No, sir. Nobody won't have me." Molly's face would certainly not be deemed equivalent to a fortune in the matrimonial market.

"She's a good deal better off single, sir," says an old woman. "I know that to my cost."

Molly won't look us in the face, but she keeps to her point, and honestly confesses her matrimonial inclinations.

"Ah!" says another—a young woman looking

very flushed and heated with her work. "I never used to work half so hard as I have since I got a master. Molly oughtn't to say a word; she's better off than any of us."

But Molly is very stubborn; shakes her head, and goes on with her work; evidently convinced that the married women have entered into a compact to dissuade the single women from matrimony.

I learn that about fifty of these women, with about twenty men, do the whole work upon a hundred acres of land in the busiest season. In the winter time, half that number only are employed. Women are strong enough for almost any kind of labor required, except trenching and the like. A number of supernumeraries (all women) are employed in the strawberry season, who earn five shillings a day by carrying the fruit to market on their heads. No other kind of carriage answers. Some of the best hands are retained all the year round. In seasons when there is not much doing in the ground, they are employed in mending garden tools, painting and repairing hand-lights—three thousand in number—besides frames and other "plant."

My conductor regrets that he has little more to tell me; but I assure him that I have heard and seen enough to convince me of the extraordinary skill and pains with which market gardens are cultivated.

"Why, sir; we do all naturally try every means for producing a good thing. Look at that field of cauliflowers, for instance."

"Cauliflowers! I don't see a sign of blossom on any of them."

"No! If they were allowed to be exposed to the sun, they would turn yellow in a few days. Every morning the outer leaves of the plant are folded, one by one, over the flower. Each one, I may say, is regularly nursed and brought up by hand. My man, I'll warrant, knows every plant individually by the shape of the head and the varied paleness of countenance. Open the leaves, and look into them. You will find the flower as white as snow. We never allow even a drop of wet to fall on it. If it were to begin to rain suddenly, you would see our people leave whatever work they might be upon, and rush away to cover them immediately with those bell-shaped glasses, which dazzle our eyes so with the sun. All the ground about them has been covered with straw, or mulched, as we call it. We use straw for everything now. Notice that acre of cucumber frames yonder; though the plants grow upon deep hot-beds, and are all under glass, we keep every frame embedded and covered with straw. The beautiful white sea kale you find in the market is blanched by simply covering it with straw. That pinky rhubarb, which you see in winter and early spring, is forced by the same means. Straw is the market-gardener's sun-blind."

Having now made the circuit of the grounds, we pry into seed-sheds and sheds full of paint pots, and plumbers' tools, and broken frame-lights, and into out-houses full of garden implements, and huge man-traps—some with shark-like double rows of teeth; others, of the sort called the humane man-trap, because they snap the bone of a man's leg smoothly and do not make a compound fracture like the old-fashioned ones. These, I understand, are only to be set when that fearless aeronaut who lately trailed his grapling-iron through my friend's cucumber frames, and attended by a numerous train of followers, accomplished an easy descent in his flower-garden, shall announce another ascent in the Royal Mammoth Balloon. Which fact we reserve to the last, in the hope that it may meet the eye of that renowned and intrepid individual, and induce him to shape his course accordingly.

The way home is through the cart-yard; where rows of wagons stacked and ready for to-morrow's market remind me that I have another chapter to write in vegetable history. Therefore, if there be any sluggards, who, when awakened too soon, are heard to complain, and in whose gardens the thorn and thistle grow higher and higher, let them be warned in time that we intend to arouse them at daybreak one fine morning, with a summons to accompany us to Covent Garden Market.—*Household Words.*

LITTLE THINGS.

Scorn not the slightest word or deed,
Nor deem it void of power;
There's fruit in each wind-wafted seed,
Waiting its natal hour.

A whispered word may touch the heart,
And call it back to life;
A look of love bid sin depart,
And still unholy strife.

No acts fall fruitless—none can tell
How vast its power may be,
Nor what results unfolded dwell
Within it silently.

Work and despair not; give thy mite,
However small it be;
God is with all who serve the right—
The holy, true and free.

For the New England Farmer.

ABOUT BUGS.

Mr. Editor:—"B. H. Crane" will find that his method of preventing bugs from destroying vines will prove a hum-*bug*, for the good reason that the material he uses is good for the vine, but will not prevent the visits of the striped or black bug. Being a practical gardener, I have used barrels of the liquid from hen manure, from the tannery in which great quantities were used in the process of tanning, but in vain. Notwithstanding the application was beneficial to the plant, it did not prevent the destructive properties of the bugs.

Having been engaged in tanning for nearly fifty years, and after trying all other methods to preserve my vines, I have found the only remedy in making boxes from one foot to one foot and a half square, and from eight to ten inches deep, covered with what is called musquito cloth, and by this means good success has attended my efforts. I have now about 70 boxes, under which the vines look flourishing, and those not thus covered are nearly destroyed. With the utmost respect for Mr. Crane, I sign my name as a constant reader, as well as an admirer of the *N. E. Farmer*,

S. L. Billings.

Rockingham, Vt., June 21st, 1858.

For the New England Farmer.

INFLUENCE OF SEX.

MR. EDITOR:—The prevailing opinion has heretofore been, among those engaged in the rearing of milk cows, that the character of the male is more deeply impressed upon his progeny than is that of the female. Indeed, farmers have been repeatedly and incessantly urged to regard the bull as of the chief importance in the making up of a good dairy. Men of extensive information and large experience, have spoken, written, and reported, citing facts, and confidently asserting the correctness of the principle. The reports of the committees of our State and county societies nearly all make particular reference to the supposed fact. Men of limited experience, without the facilities for testing the matter, and willing to profit by the wisdom of others, have taken the thing upon trust, and have adopted a course in accordance with the instruction given. But the end is not yet; in his last Report, Mr. Secretary Flint proclaims a new gospel, which is rather a disturbing element to the settled conviction of many, and will be likely to mar their faith in the infallibility of agricultural prophets and preachers.

Mr. Flint says, page 28 of his Report, "The experience of the best breeders in all countries has pretty well established the truth of the principle, which experiment will only still further confirm, that in the breeding of animals, it is the male which gives the external form, or the bony and muscular system to the young, while the female imparts the respiratory organs, the circulation of the blood, the mucus membranes, the organs of secretion, &c., and if this principle, now generally conceded by practical breeders, is true, it follows that the milking qualities come chiefly from the mother, *and that the bull could in no respect alter the conditions which determine the transmission of these qualities.*"

It may be that there is something a little beyond my depth in this, but as it gets through my wool, it entirely explodes the principles enunciated by an eminent breeder of stock, that "the male has far more influence than the female in fixing the characteristics of the progeny." According to the latest intelligence we have, it would seem that a good frame and form are the only requisites in a bull from which to raise dairy stock, and that the rest depends upon the cow. As this is a subject to which too much importance cannot be attached, it is to be hoped that a thorough investigation will be had, and the true principles which govern the matter determined and presented to the public in a character that can be relied upon.

J. K.

COOL WATER.

At this season of the year a cool draught of water is a luxury which we may enjoy with a little care. By the following method, simple and inexpensive, water may be kept almost as cold as ice. Let the jar, pitcher or vessel used for water, be surrounded with one or more folds of coarse cotton, to be constantly wet; the evaporation of the water will carry off the heat from the inside, and reduce it to a low temperature. In India and other tropical countries, where ice cannot be procured, this expedient is common. Let every mechanic and laborer have at the place of his work two pitchers thus provided, and with lids or covers, one to contain fresh water for evaporation, and he can always have a supply of cold water in warm weather. Any person may test this by dipping a finger in water, and holding it in the air on a warm day; after doing this three or four times, he will find his finger uncomfortably cool. This plan will save the bill for ice, besides being more healthful. The free use of ice water often produces derangement of the internal organs, which, we conceive, is due to a property of the water independent of its coldness. —*Maine Farmer.*

EXTRACTS AND REPLIES.

SOIL FOR STRAWBERRIES—COUGH IN HORSES.

Please inform me of the best kind of soil for strawberries, and the manner in which the soil should be prepared for them.

Also, what is the best thing to be done for a young horse, seven years old, which has considerable cold and cough.

June 16, 1858. A CONSTANT READER.

REMARKS.—New soil, that is rather moist, but well pulverized, is undoubtedly the *best* for strawberries; but they will succeed quite well on a heavy clay soil, or even on gravelly soils, with care. A sandy, moist loam, we should select. The strawberry requires great quantities of water, in order to flourish in perfection.

Moist feed and careful attention to the horse will often be sufficient to remove a cough that is not chronic. If it is of long standing, consult Dr. DADD, of Boston.

—

AN OLD USE OF GRASS—MOWERS.

As I passed the luxuriant field of grass, today, I was reminded of the use made of new-mown hay by our fathers when they constructed their defence against the British arm eighty-three years ago at the battle of Bunker Hill. I have often thought it strange that they could readily find at that time grass sufficient to be of any use for that service. But if the fields were clothed then as they are now, there would have been no difficulty at all in constructing a battery quite as effective as that of cotton, which under the skilful direction of the brave Gen. Jackson, saved New Orleans. The prospect now is that the mower will soon be in demand. Farmers should be on the look-out for those of best construction, for in so doing, one-half of this most arduous labor can be saved, as compared with the use of the scythe.

June 17, 1858. ESSEX.

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AGRICULTURAL LIBRARY.

An agricultural library association has just been formed in our town, which starts with sixty members. At the first meeting of the association, on Wednesday of last week, there was quite a numerous attendance, and a farmer's club was formed, which will include among its members all our best farmers. We intend to have meetings for discussions, &c., once a month, and we think much good will result therefrom. Our farmers are certainly as good as any in the State,

and are probably the best market gardeners in the vicinity of Boston. Strawberries are raised by them largely, and the subject for discussion at our next meeting is, "*Strawberry Culture.*" Knowing that you take a deep interest in all that tends to promote the welfare of the farmer, we thought in well to let you know what we are doing.

W. J. UNDERWOOD,
Secretary of Belmont Agricultural Library Association.
Belmont, June 3, 1858.

REMARKS.—Send us, occasionally, Mr. Secretary, brief reports of some of your discussions.

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A NEW DEVASTATOR.

A new and alarmingly destructive worm began devouring forest leaves of oak and maple trees in August last, here and elsewhere, as I have heard, in Berkshire county, Mass., and worked steadily till frost killed the foliage. They have begun here already, again.

I send you in the accompanying box, a specimen of a butterfly which has been numerous here since June began; a constant, nimble flyer, never seeming to stop to rest but for a moment upon some flower for which it seems to care but little; and then he is off in multifarious evolutions among and around the branches of trees. I have taken notice that in our adjoining oak forest the insect abounds, sailing and fluttering high like a bird. The body has a general resemblance to that of the full-grown worm of last year.

Under the butterfly lie, (as I suppose) the eggs and young worms hatching, on an eaten, shrivelled oak leaf—the offspring of the fly. Please handle and inspect with care. The leaf with the eggs glued to the underside of the leaf, I found with a branch I cut off and hung in my chamber some days since. To-day I see the worms are apparent and dislodged from their cells. How they may be when they reach you, I cannot foresee.* The dry state of the leaf may already have arrested life, and no further development take place. In another leaf, webbed together, is another worm showing further advance, and giving proof in color and stripes, so far as I can judge by the naked eye, of being the same species of insect which made so general and rapid devastation of our forest foliage last year.

If this insect is multiplied in proportion to the butterflies, the trees attacked must be made quite bare by early autumn, if Divine Providence does not interpose to prevent. I ask information, if entomologists or observers of facts can give it, as to the history of this insect. Till the summer of 1856, no insect of this sort had been known or heard of in this vicinity.

A further query: have not the martin birds, king-birds and swallows greatly diminished in numbers, and consequently insects in proportional variety and number augmented? I am sure that the race of martins, king-birds, great fly-catchers, are rare among us.

Yours truly, JONATHAN LEE.

* Further inspection shows the eggs are unhatched and that distinct, small insects, which I cannot define, I mistook for the worms. The other leaf is a valuable specimen of the leaf-eater.

REMARKS.—We have examined the eggs, worm and butterfly you sent, with interest and care. The worm is still living, while we write this, but the leaf upon which he was placed having become dry and hard, he probably resorted to the beautiful butterfly's wing for a little meat diet, he did not consume it, however, merely cutting it off very smoothly and leaving it. But what is it? The butterfly is gorgeous, with his brilliant tints of gamboge, yellow and drab, crossed by lines of black. The green worm looks somewhat more familiar, although we do not recognize him as peculiar to any particular family of plants. Please accept our thanks for this favor. The curious may inspecct these new "tormentors" by calling at our room.

There seems to be no diminution in the number of birds where we have visited in New England. Martins and swallows of several kinds are about our buildings in numbers, and the robin, Baltimore oriole, cherry birds and others, are sufficiently numerous to take about all the fruit we can produce in spite of us.

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DISEASED COWS.

I have a four years' old cow who gave a little bloody milk when she calved last year, but was good the rest of the season; she was fed on hay and grass only. When she calved this year she lost three of her teats, or nearly so. The milk was not bloody or stringy, nor the bag caked, but seemed to perish away. Is there a cure, and how?

I have another cow, same age, who has given milk two years past; last fall she appeared to have a knot in her bag, but by applying a wire I pushed it back a few times and it went away, and this spring when she calved two of her teats were grown up entirely about six inches up the bag. I made a hole through them and one gives a little milk, but it comes down very slowly. Is there any cure for such a difficulty?

East Poultney, Vt., 1858. W. DAYTON.

REMARKS.—We probably cannot do much to help our correspondent out of his difficulty. Cows are quite subject to inflammation of the udder soon after calving. The causes of this disease are various; exposure to cold, allowing the cows to get into too high condition; feeding with grain just before calving; a careless habit of not milking the cow clean, leaving a portion in the bag to become a source of irritation and inflammation in the part. We know of nothing better than to keep the bag perfectly clean with soft warm water, and the application of some sweet, pure oil, and to administer three times a day four drops of *aconite*, on meal wet with water.

It is not often that we hear of two or three cows in a single small herd affected so seriously as these appear to be, and the natural suggestion is that there must be some local cause for it, such, for instance, as lying upon a damp floor, where openings in the planks allow a cold draft

of air to pass when the cows are lying down, by which they take cold, or by some similar exposure.

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CATTLE FOR THE DAIRY.

What breed of cattle is the best for dairy purposes? Are the Jersey or Alderney cattle what they are recommended? Would they make a good cross with other breeds, such as Durhams, Natives, &c.? S. G. H.

Walpole, N. H., June, 1858.

REMARKS.—No five men in New England would probably answer your question alike. The best cows for the dairy we have ever seen were a mixture of Short Horn Durhams with our native stock, as it is called. But it is said by many that where the Ayrshire blood prevails the cows are better. The Jerseys give very rich milk, and are capital cows in some positions,—but we should scarcely dare recommend them for our common dairy purposes just yet.

—

GALLS ON HORSES.

In perusing your *Farmer*, I noticed an inquiry, "What is the best remedy for sores on horses?" I feel prepared to give you a recipe for a safe and sure cure:

Take one quart of soft water, one table spoonful of gunpowder, one ounce of white vitriol, and half an ounce of copperas. Shake them well together, and it will soon be fit for use. Apply to fresh or old sores.

I would inquire if it is beneficial to give cows their milk after the cream is taken off.

Felchville, Vt. T.

REMARKS.—Skimmed milk is excellent for cows.

—

WOOD ASHES.

I wish to inquire the best use to be made of wood ashes. M. V.

New Hampshire.

REMARKS.—Scatter them on your grass land, apply to corn crops, cabbages—they do not come amiss on any crop—save them all.

"NO MAN LIVETH UNTO HIMSELF."—God has written on the flowers that sweeten the air—upon the breeze that rocks the flowers upon the stem—upon the rain-drops that refresh the sprig of moss that lifts its head in the desert—upon its deep chambers—upon every penciled sheet that sleeps in the caverns of the deep no less than upon the mighty sun that warms and cheers millions of creatures which live in its light—upon all His works He has written, "None liveth for himself."

SOOT TO DESTROY VERMIN.—I have been informed by a gentleman from England that they pay $45 per load for chimney soot, to spread on their land for the purpose of killing vermin. Soot is a capital fertilizer, and is frequently used to kill insects. It is certainly advisable to save it all and apply it in some way to the crops.

THE WONDERS OF INANIMATE NATURE.

"There are objects always before the rural cultivator, the result of Creative Wisdom, constantly tending to excite his wonder and admiration. A single tree is as a continued miracle before him. The germination of the embryo is a beautiful and mysterious process—the circulation of the sap, through innumerable tubes, each smaller than the finest hair, yet showing a perfection of finish under a powerful achromatic microscope, far excelling the most elaborately made parts of the finest watch—and these tubes in such amazing numbers, that I have counted and estimated in a single apple tree limb, one inch only in diameter, no less than one million. The leaves on a fully grown pear tree are half a million in number: yet every one of these leaves is divided up into minutely branching veins, and every branch is furnished with great numbers of these sap tubes or vessels—every part of the leaf is made up of millions of microscopic cells, more perfect than the cells of the honey bee,—and the minute pores on the surface of the leaves, through which the ascending sap evaporates, while changing its nature to descend again to form new wood, are so small that 30,000 are found on a single square inch of surface—while the beautiful process constantly going on for months together, in the circulation of food for the growing leaves and forming fruit, through these myriads of pores, is immeasurably more complex, more complete, and more really wonderful, than the working of the most perfect steam engine ever made by man.

"We see in the water only, which supplies the wants of the growing tree, several most remarkable properties, without which every living organization in the vegetable world must perish—and those gone, what would become of the human race? Were it not for the capillary attraction between the particles of soil and those of water, the earth would not retain moisture a moment—it would instantly pass downward through the soil; and blooming gardens and refreshing landscapes would soon become a frightful desert. Were it not for the latent heat contained in water, the whole upper portion of the soil would freeze instantly as soon as the thermometer sunk below the freezing point; and no matter how deep the snow might be upon the surface of the earth, the very moment the temperature of the air rose above freezing, the whole would instantly dissolve into water and cause the most destructive floods. The latent heat of vapors prevents the instant expansion of all the water which moistens the ground, on the first warm day. And these and many other most accurate contrivances, show beyond contradiction, that all that supports us and maintains our existence, and that sustains us during every breath we draw, is the design of a Superior Power on whom we constantly depend. But the thinking mind does not stop at the boundaries of his own garden.

"What a theme for contemplation is the view of a broad meadow, consisting as it does of countless millions of blades, and every one of these made up of myriads of beautiful vessels and tubes, all having the most perfect finish. Every tree of the thousands which compose the broad landscape is so wonderfully constructed, that an

ingenious man could not manufacture a single leaf or shoot, in all its parts, in a whole life-time. But what is a broad landscape of a few miles in extent, to the wonders of the earth's surface at large, with its far-stretching and gloomy forests, its ranges of sublime and mighty mountains, its long-sweeping rivers, and the eternal turbulance of its rolling oceans! Yet every portion is filled with microscopic wonders, and the most beautiful proof of Omniscient design—and shall any one say or think, that with this proof of the infinite number of creative conceptions, afforded by the myriads of organized and animated objects upon the surface—the ever-varying beauties of the clouds and skies—the rain-bows and dew-drops—the placid lakes and rolling seas—the delicate flowers and blackening forests—the gloomy tempests and the crimson sunsets—that he would forego the contemplation of all these, merely for the sake of scooping together dollars and cents, and spend the vigor of life within the confines of the dark, brick walls of the city, poring over columns of figures; or in the midst of rural cultivation, shut his eyes closely to everything else but the process of converting one dollar into two."

The above is from the Address of Mr. J. J. Thomas, before the Western New York Fruit Growers' Association.

CAR TRAVELLING.

All persons travelling in the cars, where there is no escape from a pretty close personal contact, are bound by a sense of common decency to keep their person and their clothing sweet and clean. They have no right to make the way disagreeable or unpleasant in any respect—either by opening a window and allowing a cold stream of air and a shower of cinders to come plump into their neighbor's face, or by contaminating his atmosphere by the use of narcotic or other weeds, such as smart weed, tobacco, camomile, cubibs, catstail, hellebore, or assafœtida! What may be a breath of fragrance to one, like the logs among the frogs, may be a stench to the nostrils, or death to another. There is no accounting for tastes,—and each one has a right to his own, provided he does nothing to molest another. The contents of various gallipots of sticky cream, yclept pomatum, or rancid bear's grease, which was once innocent cow's, or mutton tallow, should never be poured upon the skulls of persons about to travel in the cars.

Above all, never be so ungentlemanly and indecent as to spit on the floor of the car, either between the seats or in the aisle, upon which women and children may slip and break their limbs, or which they may carry away upon their flowing robes. Be decent in every thing—in behavior, in appearance, in language. Give up your seat to the women when they enter a crowded car, no matter how many miles you may have just rode or walked in the hot sun, and do not be so weak as to suppose that one woman in ten will condescend to say, *"I thank you, sir,—you are very kind,"* because if you do so suppose you will be mistaken. They will plump themselves into your seat with an air of *"It belongs to me, sir,"* and you may find another seat if you can, or stand at the window of the door, and count the cinders that are whirling on the breath of that monster tearing along before you.

"A want of *decency*, is a want of sense."

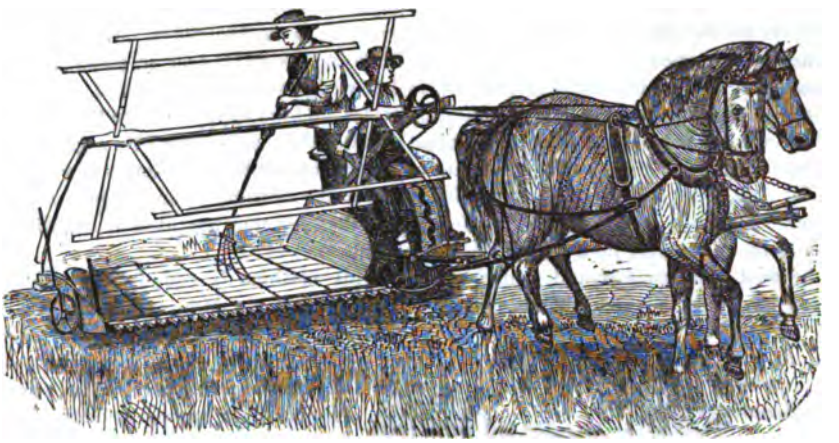
PLANTING A WALNUT GROVE.

As near as I can recollect, about twelve years ago I planted a row of these nuts south of my house, in the edge of the plowed land. I planted in the fall soon after the nuts fell, four feet apart, with a hoe, about two inches deep, as we used to plant corn down east. The next spring they came up with the other plants. I kept the stock from them for four or five years. The most of them grew rapidly; but they were too thick, and some are now dwarf trees, four to six feet high, while those that got the start went right up, and in six or seven years from the planting they bore walnuts, and they continued to bear and grow so that this fall I had several bushels of nuts, and have planted a piece of two acres west of my house with them. These I put ten to twelve feet apart. I think it would be better to plow as deep as you can before planting. I think it will make little difference whether you plant this winter or as the ground opens in the spring. Keep the weeds down and the stock from them, and there is no danger but you will have a grove far more beautiful than the locust; besides, the advantage of timber and nuts.—*Cor. of Prairie Farmer.*

Another correspondent of the same paper says he planted five acres to walnuts in 1843, and that a large portion of the trees that are now standing, are from 20 to 35 feet in height, and 8 to 10 inches in diameter.—*Country Gentleman.*

Not Making Money.—"I am farming some, pretty satisfactorily to me, though I am not making much money, but I *am making my farm better.*" Friend M. said this to us a few days ago in answer to our inquiries after his progress. That was a very significant answer. Is he not making money then? Is he not investing it at the same time where it will yield him the greatest dividends? Farmers need not go away from home to invest their surplus profitably. They need not contribute to the wealth of defaulting treasurers of land companies, or to the ill-gotten gains of speculators in paper town lots.

The Properties of a Good Horse.—A good horse should have fifteen good properties and conditions, viz:—Three of a man, three of a woman, three of a fox, three of a hare, and three of an ass. Of a man, bold, proud and hardy; of a woman, fair-breasted, quick hearing, and easy to move; of a fox, a fair tail, short ears, and a good trot; of a hare, a clear eye, a dry head, and a well-formed body; of an ass, a big chin, a flat leg, and a good hoof.—*The Sports and Pastimes of Merry England.*



THE EAGLE MOWER AND REAPER.

Most of the progressive farmers who annually cut thirty tons of hay have now come to the conclusion that it is more economical to use a machine and the power of horses to cut their grass, than to sweat it out of the muscles and sinews of their men. Wherever the land is suitable for the use of a machine, we have no doubt but this is a just conclusion. We propose now to speak of what, in our opinion, constitutes a good machine, and then of the advantages to the farmer in employing one.

1. A machine, to operate successfully and to possess some degree of permanency, must have considerable weight, in order to withstand the resistance made by the grass, but more especially to resist the power of such a team as is required to work it, whenever any obstacle is presented to obstruct its onward motion, such as a stump or fast stone. Such obstructions will occasionally occur, in despite of all the foresight and care that can be exercised. The experiment has been tried to build lighter machines, but they have not yet, in any case, we believe, succeeded in performing the work required of them.

2. The machine that will cut an acre of grass in the shortest period of time, unless it possesses other indispensable points of merit, is by no means the best machine on that account. The desirable point is to get a machine that may be kept long in motion at a slow pace, without being compelled to stop to adjust its parts, to rest the horses, clear the knives, or make any alterations whatever.

3. A good machine will be easy and convenient to back, so that in turning the corners, the horses, by a gentle and sort of natural pressure on the breeching, will throw it back and bring it into line for the next swath.

4. Few fields are so completely clear but that occasionally some obstruction will meet the eye of the driver, and it is necessary for him to stop at once where he is, and remove it. It now becomes important to be able to start again without backing.

5. A good machine will enable the farmer to move it from place to place on its own wheels, without any motion or danger to the knives, so that he can pass over stones or dead furrows without risk or inconvenience.

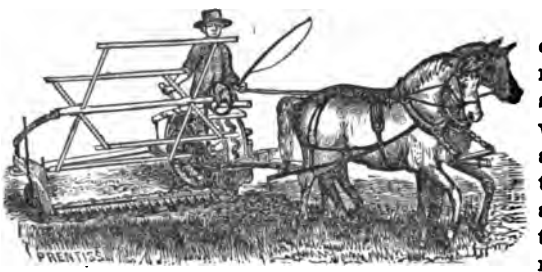
6. Such a machine will have knives constructed of materials so excellent that they will perform a large amount of work without being sharpened. On fair land, it is only necessary to touch the knives a little with a scythe-stone once, in cutting twenty to twenty-five acres with the Eagle machine.

7. The strength of the knives and their arrangement is such that there is scarcely any danger of their being injured by coming in contact with stones, or by passing through hummocks of soil, or even small hassocks.

8. A good machine will cut the grass *at any time*, whether it be dry, or wet with dew or rain. The foreign, and some American machines, have failed in this particular in England. Where the grass was thick and fine and moist in that moist climate, many machines have failed to cut it, and have been pronounced failures. The Eagle works

clear and easy under such circumstances as these, and cuts the grass just as smoothly as though it were red-top or herds-grass with straight stems standing two feet high.

The above are the principal points of excellence, indispensable in a good machine, and from the closest scrutiny of the principles of the one in question, and from a personal practical application of it to the work of mowing, we are confident that it possesses them all. With a trifling amount of mechancal skill, one may set it up and drive it with complete success. Such should be the machine; now let us consider for a moment whether it may be used with comfort and profit by such farmers as have land in a condition to receive it.



1. To spread grass as it ought to be, where there is more than one ton to the acre, it will cost at least 25 cts. per acre, and we assume from this, that on any farm where twenty to thirty head of cattle are kept, *the cost of spreading alone*, which is done by the machine, and done infinitely better than it can be done by hand, in ten years *will pay for the machine and the interest upon the purchase money!* Another advantage is that the grass is spread just as fast as it is cut, and being cut within a short space of time, is all drying alike and at the same time.

2. With a machine, grass may be cut so rapidly that the whole process of haying may be carried on evenly, and no day or half day of brilliant sunshine lost.

3. The mowing may also be done by those who are not able, or do not care to perform the labor of a full hand—by an elderly or infirm person, or by a smart boy who would not be expected to enter the field as a mower.

4. It may be done on moderately sized farms after five o'clock in the afternoon, in the cool of the day, and the grass be ready the next morning for the action of the sun, not having wilted sufficiently the evening before to harm it in the least.

5. It may be done on most farms without any extra cost for team, as oxen work the machine well where horses are not conveniently at hand.

We do not wish to be understood that there is to be no further improvement in mowing machines,—not at all,—we believe there will be; but only this, that up to this time, *the new Eagle mower seems to us to be of the easiest draft,—to do the most work and in the best manner of any machine in our knowledge.* We have spent much time and thought over it, aided by a tolerable knowledge and appreciation of mechanical principles, and are happy to give the readers of the *Farmer* the result of our investigations. But we cannot forbear to urge them, as far as is possible, to see the machine in operation for themselves, and then reject or purchase upon their own judgment.

This machine is equally well adapted for a Reaper as for a Mower, and we give a cut of each showing the difference between them.

On the 23d of June we put in operation one of these machines, which was taken at random from among several hundred, and sent to us without any special preparation whatever,—was put together and immediately taken to the field and put into grass that would give about two tons of hay per acre. Two rather light horses were hitched to it, and the work went on without interruption until the piece was finished, *cutting the grass and spreading it*, with an evenness that no hand of man could imitate. The team was repeatedly stopt in the middle of the thickest grass, and started again without backing, and the corners turned with regularity and certainty, without pressure either on horses, machine or driver.

The next field into which it was taken presented a much severer test—the grass was thin, wiry June grass, yielding 500 or 600 lbs. per acre, while the bottom was a bed of "old fog." The company of farmers present admitted that a good mower with a keen scythe could scarcely go more than ten rods in such a place without whetting, while the machine cut the last swath of the acre and a half just as evenly as it did the first!

The approbation of the lookers-on was universal—they had witnessed nothing equal to it before in any machine—for while the draft is light, they said, it does more work than other machines by cutting a swath *five feet* across. But we will not go into details of the trial to-day, and have only room left to advise those who contemplate purchasing a mowing machine to see this one in operation before making a selection.

This is the machine to which was awarded the premium of $1000 by the Massachusetts Society in 1856.

Barley.—It is stated that the first barley sown in this country, was upon the island of Martha's Vineyard, in 1602, by a man named Gosneld, who introduced this and other varieties of

grain from England into Massachusetts. In 1811, barley was sown as a crop in Virginia, and continued to be cultivated there until the settlers found tobacco more remunerative. In 1626, barley was one of the crops grown upon Manhattan island; probably where Trinity church now stands. In 1849, the barley crop of the United States was 5,167,000 bushels; and according to the increase of the preceding decade, the crop of 1856 would be over seven millions of bushels. It probably even exceeded this. The grain is nearly all consumed in the States where it is grown, principally, we presume, for malting, as the price is too high for feeding to stock.

CUTTING AND CURING CLOVER HAY.

According to the thirty years' close observation made by the writer of this article, there is but one method of curing clover hay that pays well for the labor, and that I shall describe shortly.

Observation has taught me, that the best time for cutting clover is when two-thirds of the blooms begin to turn brown. At this stage it makes the best hay, and is not sappy enough to reduce much in the curing process.

When the clover is in the above stage, cut it as rapidly as possible; but never cut when there is dew or rain water on the clover. Let the green clover be put in small shocks as fast as cut down, so that the sun may not wilt it. When enough is cut and shocked for a large stack, haul up and stack as fast as possible. The stack should be some fourteen or fifteen feet at the base, and sixteen or eighteen feet high, so put up as to make it the shape of a cone. With a hay fork, let one hand throw up the green clover, while two hands stack and trample it, so as to make it as near air-tight as possible. Every foot in height should have about one quart of salt sprinkled regularly over it. This will require about 75 lbs. to the stack. In finishing, top it off and rake it down so as to turn rain. In ten or twelve days it will become wet and hot, and smoke like a coal pit, so as to have all the appearance of rotting; but in ten or fifteen days more it will cool off, and be found dry, bright, sweet hay.

If the clover were allowed to wilt before stacking, the hay would be dark and mouldy; but if put up green, it will be bright, green, and sweet, and free from mould. This process preserves all the leaves of the clover, so certain to be lost by any other process; and it also preserves all the volatile constituents of clover, which are sure to be lost when it is cured in the sunshine or open air.

The whole management may be summed up in a few words. Cut and stack free from moisture, in the perfectly free state; salt it well, and make the stack as nearly air-tight as hard tramping can make it.—*F. H. G., in Genesee Farmer.*

REMARKS.—We do not feel disposed to say that clover hay *cannot be cured* according to the above plan, because we have never tried it, having learned long ago, that many things can be well done that seem hard to believe until we have made a personal trial ourselves. If clover hay can be cured in this manner, it may be done with great rapidity, as it may be stacked upon the field and removed in the winter to the barn.

The article comes from a respectable source, and is worth considering.

For the New England Farmer.

COWS THAT HOLD UP THEIR MILK.

MR. EDITOR:—In the *Farmer*, a few weeks ago, you recommended that cows disposed to hold up their milk should be fed when the milk is drawn from them. That suggestion came very opportunely to me, as well as to the correspondent whose inquiry caused the advice to be given. I had a cow that calved in November, and through the winter and spring she frequently retained a portion of her milk, notwithstanding very pressing entreaties on my part. This retention of milk was so frequent that she did not give more than two-thirds of what I supposed I had a right to expect. I have always fed my cows when beginning to milk, but as this one stands not among the first, she no doubt often finished eating what was placed before her, before her turn came to be milked. On reading your suggestion I adopted the plan of feeding her immediately before sitting down to milk her. The result has been entirely satisfactory. She now regularly gives down her milk as promptly as any cow in the barn, except in some instances, when, as a test of the certainty of the remedy, I have omitted the feed. In all such cases she has invariably retained her milk till the feed was given; and then, rather tardily, however, the milk would come. Gratefully yours, M. P.

Concord, July 8, 1858.

P. S. If any of your readers do not know that a green leaf or two of some plant that has large leaves, or a small handful of green clover placed in the hat, is a great comfort and protection to those who work in the hot sunshine in these warm days, let me recommend all such to try it.

THE NATIONAL HORSE EXHIBITION.

In another column is a more extended notice of the National Horse Exhibition which is to take place at Springfield, September 14, 15, 16 and 17, 1858. Every thing, we learn, has been done, to make the show attractive. About $3,000 are offered in premiums. Springfield is one of our most beautiful cities, and its citizens are as much distinguished for their urbanity and intelligence, as the city is for its fine attractions, so that those who attend the show cannot well fail to have a good time in one way or the other, provided they go in good nature with themselves!

CHALK FOR WARTS.—A correspondent, W. H. Bennett, of Warwick, R. I., informs us that by rubbing chalk frequently on warts, they will disappear. In several instances known to him, in which this simple remedy was tried, it proved successful. We have know slightly-moistened pearl-ash to remove warts by rubbing it upon them.—*Scientific American.*

For the New England Farmer.

CARE OF STOCK.

MR. EDITOR:—We often read about the care that should be taken of stock in the winter in order to promote the health and growth of the same, but very seldom do we see any thing written with regard to the treatment they should receive in the summer. Now I do not wish to say that great care should not be taken of stock in the winter, but it also needs care in the summer, and I wish to say a few words with regard to it.

The difference betwcen stock well provided for and that but half taken care of is apparent to any person who has taken ordinary pains to inform himself, and I am not afraid to leave it to the readers of your paper to say which pays the best.

Solomon says, a righteous man regardeth the life of his beast; he was right; not only would a careful man prove himself a benefactor to his stock, but would increase the profits of the same; his cows would give more milk, and in consequence of which he could sell more butter, fat more hogs, and as a matter of course, make farming more profitable.

Cows should, during the spring and summer, be provided with warm and dry apartments in case of a storm, more especially, the cold storms of spring, in which case it is better to keep the cattle in the barn during the entire day, with the exception of letting them out for the purpose of getting drink. Cows should also have all the salt they wish to eat; put it before them about twice a week, which will tend very much to keep them hardy.

A change of pasture, also, is of great advantage to cows, more especially in case of a drought, as then the cows can have fresh pasture through the entire summer, by merely transferring them from one lot to another.

I might say much more about the management of stock at this season of the year but I think that every correct farmer will study the comfort of the animals under his care, not only from a common principle of humanity, but from a healthy and laudable regard for his own interests.

H. G. PALMER.

Lebanon, Conn., June, 1858.

THE TIME TO CUT WHEAT.

This has been made a matter of careful experiment in England, and much more depends upon it than is generally supposed.

From a very careful series of experiments made in England, in 1840–41, by Mr. John Hanman, of Yorkshire, with a view of determining the proper period of reaping wheat, it was decided that the best time for performing the operation is, when it is in a "raw state," or when the straw, as seen from a distance, appears green, but, closely examined, is found to be approximating to yellow, and the grain itself, being separated from the chaff, is pulpy and soft, but not in the milky stage. This gentleman has shown that, at least six dollars per acre are lost by allowing the wheat to become ripe before it is cut, and, that at the same time, its quality is not so good.

The chief advantages derived from this method, are stated to be a greater weight of grain to a given space of ground, which produces more flour, of a superior quality; the straw contains more nutritive matter, and is better relished by animals; and there is a better opportunity of securing the crop, and a saving so doing, as there is less waste in moving or reaping the wheat by the dropping out of the seed.

It will be seen in this matter, how much a farmer's success depends upon an accurate knowledge of his business. Even in so small an item as the cutting of grain, the owner of fifty acres would lose three hundred dollars, by harvesting a few days too late. There are many other farm operations in which accurate knowledge is quite as important. Is it any wonder that so many of our farmers do not make money, when there are a hundred holes in their pockets, through which the money is dripping out in dollars, dimes, and cents? The whole year is a scene of prodigal waste, for want of a little knowledge. Wood is wasted for want of a good stove, or a tight house. Ashes are wasted for want of a dry place to put them. Fodder is wasted for want of a tight barn to shelter cattle, in the winter nights. Manures are wasted for want of a barn cellar, and sheds, and absorbents. Labor is wasted for want of manure to produce maximum crops. Is it strange with all these leaks, that the farmer's till does not fill up faster?—*Homestead.*

NEW PUBLICATIONS.

PEAR CULTURE. A Manual for the Propagation, Planting, Cultivation and Management of the Pear Tree. With Descriptions and Illustrations of the most Productive of the Finer Varieties, and Selections of Kinds most profitably grown for market. By Thomas W. Field. A. O. Moore, Agricultural Book Publisher, 140 Fulton Street, New York.

A treatise on the culture of the Pear was wanted, by beginners, and we have no doubt the one before us will pretty generally supply that want. It touches upon every point, we believe, relating to the culture, ripening, and varieties of the pear, and the doctrines it advocates are those usually entertained by persons who profess to understand the subject, with, perhaps, one or two exceptions. The doctrine set forth under the head "SEASON FOR PRUNING," we believe to be erroneous. In pruning, we must be governed by the physiological condition or habit of the plant, whatever it may be. The author says, "the best season for pruning the pear is after the buds begin to swell in April, until the new leaves are half formed." According to our observation, and experience, too, this is the most unsuitable time to prune in the whole twelve months,—because the pores of the wood are distended and filled with a watery fluid on its way to the twigs and leaves there to be elaborated into that pabulum which may be the most readily converted into wood and bark. But the wound is made, the thin, watery fluid passes out freely through the open pores, and often continues in this condition for years, or, in many cases, until the tree is ruined. If these wounds were made from the 10th to the 20th of June, after the limpid sap

had passed up, their surfaces would become dry by the action of the sun and wind, and when the returning sap, now converted into proper food, comes along, it soon encircles the wound with a bright, green, healthy bark, which soon covers it entirely over, and the tree is safe. Spring pruning has wrought more mischief among our orchards, than all other calamities combined.

The execution of the work sustains the high reputation which this old publishing house has acquired. The illustrations are good, the type large and clear, and the book is concluded by catalogues of American and foreign pears, and a good index.

We know Mr. FIELD as an enthusiast on the subject of pears, and feel free to say—a few errors excepted, perhaps—that we think he has done the public an essential service in publishing his book.

For the New England Farmer.

SALES OF BLOOD STOCK.

Public sale of Short Horns, Brood Mares, Colts and Swine, by B. & C. S. HAINES, Elizabeth, New Jersey.

SHORT HORNS.

Lot 1.	Columbus, D B. Kershow, Philadelphia	$195
" 2.	Lafayette, William Hurst, Albany	205
" 3	Sanhican, H. C. Greenwall, Pennsylvania	185
" 4.	Mohean, E. D. Pearce, Providence	150
" 5.	Essex Hero, Robert Campbell, N. J	205
" 6.	Gen. Havelock, D. B. Kershow, Philadelphia	200
" 7.	Not sold.	
" 8.		

COWS.

Lot 9.	Lady Cartaret, Robert Campbell, N. J	$140
" 10.	Gertrude, William Kelly, Rhinbeck	215
" 11.	Creampot 6th, " " "	125
" 12.	Jenny Lind, E. Halsted, N. J	110
" 13.	Duchess Rose, " "	110
" 14.	Jessie Brown, George W. Adams, N. J	60
" 15.	Rose, E. I. Halsted, N. J	75
" 16.	Sophie, A. B. Conger, N. Y	30
" 17.	Nymph 5th, Timothy Mather, Hartford	250
" 18.	Gipsey 3d, Dan. Talmage, N. Y	120
" 19.	Nymph 8th, R. Hursby, Brooklyn	100
" 20.	Nymph 9th, D. B. Kershow, Philadelphia	200
" 21.	Nymph, William Hurst, Albany	165
" 22.	Troe, imported, A. B. Conger, N. Y	325
" 23.	Sunshine, Henry Meeker, N. J	290
" 24.	Nymph 7th, D. B. Kershow, Philadelphia	700

BROOD MARES AND COLTS.

No. 1.	Black Hawk Maid, William Hurst	$225
" 2.	Fanny Kemble	210
" 3	White Stocking, William Kelly	110
" 4.	Lady Franklin, G. W. Adams	170
" 5.	Pet, E. J. Cowley, N. J	160
" 6.	Aurora, C. P. Wood, N. Y	260

SUFFOLK PIGS.

25 pairs brought from $10 to $15 per pair.

BERKSHIRE.

6 pairs brought from $10 to $18 per pair.

PIG BREEDING.—An experienced English pig breeder says: "In breeding, the sow should be larger than the male, and the male the most perfect of the two, as the sows will generally breed to the boar; that is, the good or bad points of the male will preponderate more in the young ones than those of the sow. And I have found that the boar the sow may have had pigs to, the litter before, has a great deal to do with the following litter. I once put a black sow to a white boar, and had some black and white pigs; I then put her to a black boar, and still had some black and white; and I had to wait for three litters before getting rid of the white. I once purchased a large-bred Yorkshire boar, and more than ninety per cent. of his stock died from inflammation of the lungs, or were more or less affected. I afterwards learned that the sire of the boar died from the same complaint. All this convinced me how particular one should be in using a pure and sound male animal."—*Genesee Farmer.*

For the New England Farmer.

LEGITIMATE COOKERY, AGAIN.

In a late article on Reformed or Legitimate Cookery, I have, on one point, said either too much or too little; because I have broached a topic which, to not a few housekeepers, will be rather new; and yet I have not made a full, practical application of the rule it was intended to inculcate. I refer here to what I said, incidentally, concerning milk and the egg.

These articles, as I stated, contain more or less of albumen; the egg a very large proportion. This substance, (albumen) when subjected to a heat equal to 165° Fahrenheit, and all the processes of ordinary cookery, such as baking, boiling, frying, &c., involve this degree of heat, and much more, becomes insoluble by anything which is ordinarily found in the human stomach. It can only be dissolved by the mineral acids, the nitric, the sulphuric and the muriatic. Hence it is, to say the least, entirely unnutritious; and consequently, wasted. But it is more than wasted; it is positively undigested; and hence is positively injurious. On this account it is that hard boiled eggs, for diseased and debilitated stomachs, have been, time immemorial, regarded as unwholesome. They are, in this state, as every one may observe, also inodorous and insipid.

But there is no necessity of cooking them at a temperature above 165°. By cooking the egg or any other albuminous article at the temperature of about 160°, and continuing the application of the heat a little longer than usual, you may gain every point of importance which you would gain by a temperature of 212°, and without any positive loss. The taste is even, to most persons, greatly improved. The albumen is indeed coagulated; but is not so hard or consolidated. Nor is there any mystery in this matter, or very much of tact or skill required. To cook the egg, legitimately, you have but to take care that the heat does not rise above 165°. You may, indeed, be required to use a cheap thermometer for a short time, but a very little observation and experience will enable you soon to judge correctly enough without the thermometer. Even if the temperature falls to 150°, it will do very well, except that the lower the heat, the longer time will be required to accomplish your object.

What, however, was my principal aim, when I began these remarks, was to extend the application of the principle. If the egg is injured, both wasted and rendered irritating, by being cooked alone, it is so when it enters into the composition of all our complicated dishes. It is true we have not yet attained, like the French, to nearly seven hundred of them; but we have a very great num-

ber, possibly a hundred or more. Now, in order to have our cookery legitimate, either the egg must be withheld from all these or they must be cooked in a very different manner from what they have been heretofore. Will not science, duly regarded, hence cause a mighty revolution in our cookery?

Then again, milk, in proportion to its albuminous parts, comes under the same law. It cannot legitimately be boiled or baked. What then is to become of our puddings and cakes—nay, in some places, even of our bread? I know many a housekeeper who is unwilling to make bread without milk. The dishes, of which according to custom, it becomes a component part, are very 'merous. Whether they amount to hundreds, do not know.

But, again, the same law applies to the cooking of all lean meats. Blood contains some ten or twelve per cent. of albumen; but lean flesh, or muscle, is very largely composed of blood. Does it not hence follow that this substance, like eggs and milk in all their combinations, should be cooked below the temperature of 165°?

There has been, indeed, time immemorial, a traditionary notion that hard boiled egg is injurious; but how or why, was not told us. It has also been known that milk was greatly changed, it its tendencies on the bowels, by boiling. To avoid evil tendencies, in the case of the egg, many have eaten it raw, both at the suggestion of their own minds, and by the prescription of the physician. To this there has been no very grave objection. But it has also been quite customary of late, to subject it to a species of half cooking, which seems to me objectionable. This consists essentially, in barely immersing the egg in boiling water, perhaps at the table, thus cooking a pellicle or layer of it too much, and leaving the far greater part of the interior almost raw. The true course is either to eat it wholly raw, or cook it for some time, in a heat a little below 165°, according to the foregoing directions.

It has also been faintly understood, without knowing why, that milk is best when newly drawn from the cow; and that during every moment after its withdrawal it is deteriorating. But it has not always been known why; nor have I time or room, to present in full the reasons. One of these, however, is the ulterior separation of its parts, or a tendency thereto, in the formation of cream and whey, &c.; and another is the fact that when it is kept, it finds its way into an almost innumerable company of our dishes.

Meats, it has also been contended, meats which include muscle, should be cooked but little; or as it is expressed, should be "rarely done;" and some few have gone so far as to contend even, that raw meats are the most wholesome. Now the whole matter is made plain, and all mysteries or difficulties removed, when we remember that lean flesh, made up largely of condensed blood, is of course albuminous; and is hence injured by subjecting it to an elevated temperature. Let our meats, both fat and lean, but especially the latter, be cooked for a long time at the temperature of about 160° to 165°; that is, let them be stewed* rather than consolidated; and the epicurean, even, would be a gainer, while not only he, but every body else, who has good teeth, would be healthier. Even to those whose teeth are defective, it may be some consolation to know that one cause of their trouble may be found in the fact that in saving the labor of the teeth by over cooking, we overtax and abuse the stomach and other and kindred organs, which cause a re-action on the teeth.

We may see also from the foregoing, incidentally, why cheese, custards, &c., have universally been deemed unwholesome; and why some whole nations make no cheese, or even any butter. Society, in its simple state, is restrained from those abuses, which, in a more refined condition, it possesses the power to counteract. In neither condition, can we proceed so far in the way of transgression, as wholly to set at nought the great first command, "Be fruitful, and multiply and replenish the earth, and subdue it."

Auburndale, June 5, 1858. W. A. Alcott.

* Of late years I have heard much said about the superiority of stewing rather than boiling many substances of purely vegetable origin, but more or less albuminous, especially beans. Now I have not yet satisfied myself of the truth of Liebig's theory so fully as to be able to say positively, that the albumen from animals and vegetables is identical. The doctrine, however, is at least plausible.

CLUB FOOT CABBAGES.

Messrs. Editors:—I have read Mr. Yale's article with the above heading, and will tell him the cause of the "club foot," which may enable him to account for the difference in his crop of cabbages last year.

A cabbage with a "club foot," is a cross between the cabbage and turnip. The seed plants have been placed so near each other, that the pollen of the turnip has impregnated the cabbage and produced the cross. There is no doubt but that this is the cause of the anomaly. Hundreds of experiments have proved it. If Mr. Yale could get at the experience of the man who grew the cabbage seed he used, he would learn that his turnips tried to be cabbages, and had club heads instead of feet. The Kohl Rabi, I think it is called, is a cross of the same character, and is now a vegetable sought after in the market. It was produced in the garden of Prof. Mapes. Was not Mr. Yale mistaken in saying this crop of cabbages was all from the same seed? If so, was not the seed gathered at different periods?—W. F., *in Homestead.*

Farm Buildings.—At a Farmer's Club lately held in West Springfield, Mass., after a consultation and debate, it was decided that a large barn was better than two or more small ones; that a tight barn was better, even for badly cured hay, than an open one; that a brick barn and slate roof were the best and cheapest for a man who has all his materials to buy; that a good connection between a house and barn is a covered walk, overhung with grape vines; that economy of roof and convenience for work were of the first importance in any building; that warm water and warm stables were essential to the comfort of animals; that the housing of manures was judicious; that liquid manures are largely lost, even by those who have cellars and sheds for storing them; and that the best absorbents of liquid manure are buckwheat hulls, leaf mould, sawdust, fine sand, dried peat, turf and straw.

For the New England Farmer.

THE BEST WAY TO MAKE LARGE FIELDS.

MESSRS EDITORS:—I have been dabbling at farming and experimenting upon a small scale, and laboring practically, when other business did not interfere, for nearly a half century past. My farm consists of nearly 200 acres of "Wilmington land," of all descriptions except the best. I have soil which ranges from good down to the very cheapest. I find more or less profit derived from it all. My best lots we cultivate and use for pasturage, the remainder, of upland, produces a quick and profitable growth of wood; my low land produces a plenty of meadow hay, occasionally a crop of cranberries, and any amount of water bushes, and a profusion of meadow flowers, besides answering the purpose of a reservoir for a mill pond. When I commenced farming here, I did as many of my neighbors did, made my fields too large for my manure. It cost me as much to cultivate four acres of corn that produced 15 bushels to the acre as it would the same number of acres which would produce 40 or 50 bushels to the acre, beside the loss in the depreciation of the soil, which is not duly considered by many farmers.

A light crop of corn was not the end of the evil; my grass seed, if it came up at all, was no more prolific than the corn that grew on the same ground. I found a great difference in raising my supply of corn, between the expense of raising it on four acres and cultivating two acres to obtain as large a quantity. We cannot cheat our land, but we can cheat ourselves in trying to do it. If we have but little manure, make a little land better than it was before; in that way there is a great saving of expense in labor and time. I find by making every little field which is laid down to grass richer and more productive, is the direct course to larger fields. The best way to enlarge fields is to get large crops from small fields. Large quantities of manure applied to small lots of land is much the cheapest way of farming on Wilmington, and much other soil in our State.

The great Creator of New England never designed it for large farming operations, as is evident from the "lay of the land and the nature of the soil," but for a hardy band of republican patriots, who could do their own farming and fighting successfully, by cultivating small farms and keeping an eye well directed to the enemy. I believe, in the prevalence of the late "panics," that the small farmers have escaped the epidemic as well, if not better, than those who have been engaged in an extensive business of almost any kind. The inordinate desire to gain wealth often defeats its own purposes and instead of conducting the deluded aspirant to the true *El Dorado*, it conveys him to the barren mines of poverty.

North Wilmington, 1858. SILAS BROWN.

COLD WATER TO CURE SCALDS.—I placed a large tub full of cold water, with plenty of ice in it, by the side of a large kettle full of water, which was boiling very fast. I then rolled up my sleeve above the elbow, and thrust it into the kettle of boiling water up to the elbow, then immediately back into the tub of ice water, letting it remain a few seconds, then into boiling water again, repeating this process ten times in a minute, without injury or inconvenience, not even making my arm look red. From this experiment I suggested the propriety of using cold water baths instantly after being scalded. I have practiced the above remedy with entire success during the last ten years. Cold water is always handy where there is hot water. The sooner cold water is applied after scalding, the surer will be the cure.—*Ohio Cultivator.*

For the New England Farmer.

A GOOD WEEDER, THAT NEED NOT COST A COPPER!

MESSRS. EDITORS:—I yesterday saw in the hands of Mr. William Goodwin, of our town, a very useful little implement for weeding, which might rest a good many aching backs. It was simply a rusty table-knife, sharpened towards the point, on both sides of the blade, about two inches of which was then bent up like a hook and firmly secured by the handle to a strip of light pine, of sufficient length to enable a man to use it as a weeder while standing erect. If our friends will try this simple weeder, they will find, after slight practice, that they can weed about as clean and nearly as fast as with the hand. The weeds are removed by a scraping movement. In wet weather it will prove a capital preventive of rheumatism and cramp in the limbs. Let no one "poh" upon this implement because of its simplicity; if he has much bed sauce to weed, let him try it, and he may have reason to thank our friend for his "notion."

J. J. H. GREGORY.

Marblehead, Mass.

THE DROP-WORM—AGAIN.

EDS. RURAL:—I am perhaps like friend "PLOW HANDLE," somewhat ambitious to see my name in *print*. Yet I hope I will never trouble you and your readers unless I have something to say unto edification.

The article in the last number of the *Rural* on the "Drop-worm" is excellent. By way of gossip, I will give you my brief experience of this villanous insect.

On the the 21st of May, 1855, I first noticed them on a peach tree, apparently restless. However, they arrested my attention by their comic movements, sticking on the stem and branches with their then small cocoons of bits of leaves, &c., erect, while their head and first and second pair of legs were withdrawn. On July 25th, I found them increased in size on a beautiful and vigorous *Thuja Occidentalis* in my yard. Unacquainted with the creature, I left it alone to watch the process of its transformation. In short, I learned the economy of this *Oiketicus Coniferarum*, as you call it, but lost my tree. There it stands, a sad memorial of my forbearance in not picking the customers and treading them under foot.

I was amused, however, at the *ruse de guerre* of a large species of Ichneumon fly, which I observed to pinch with its strong jaws the domicile of the *Oiketicus*, irritating the tenant within until it thrust its head out of its hole, when the

wily fly gave it a dab behind the head with its ovipositor, leaving an egg lodged for future development. Good, thought I, and left them alone. Alas! some of those identical cocoons now ornament the bare branches of my once beautiful evergreen, not yet cut down as a cumberer of the ground. Such has been my experience, and I paid for my learning.—J. Stauffer, *in Rural New-Yorker.*

HISTORY OF A FRESH WATER AQUARIUM.

During the last spring, I commenced the formation of an aquarium. I accordingly procured a glass jar that would hold several quarts of water, and covered the bottom to the depth of two or three inches with coarse sand, with a little pond-mud on top; then sallied out in search of animals to stock it with. Going to a neighboring brook, I fished in its waters, and as the result of my endeavors, captured myriads of small fry—small shells, crustaceas, caddis worms, duns and drakes, as the English angler calls them, with many water beetles, insects, young dragon flies and tad-poles. I also pulled up several roots of "eel grass," or ballis veria, with two or three young water cresses, then just putting out their leaves, and a bunch of a beautiful delicate moss from a still pool, with multitudes of small snails creeping over its leaves. Returning home with my spoils, I immediately planted the roots, filled the vessel with pure water, threw in my live stock, and left them.

In a few days the water grew clear, the plants throve well, and the animals had accommodated themselves to their new quarters.

On subsequent walks to the river and ponds, I made new acquisitions to my little colony—several beautiful newts, or water salamanders, with some fresh water muscles, gave more variety to my collection.

For hours have I watched, with never failing interest, this little company. By degrees they became more and more accustomed to me; the salamander, instead of darting to the bottom at my approach, would remain at the top, and take from my hand a fly or bit of meat, while the water tiger, unscared, pursued with relentless hate the tad-poles round the vessel.

I found that the harmless tad-poles suffered much from their companions. The water tiger was particularly fond of nipping off their tails with his scissor-like jaws, and if by good chance they escaped, they would rush into the jaws of a voracious dragon fly, while a couple of water beetles would fight and tug away over the remains of their carcasses.

The water fleas and snails, though not so interesting in their habits, proved to be extremely useful; these little scavengers were ever on the search after any particles of decaying matter, on which they live. They are the humble means of removing from our swamps much foul matter which gives rise to deadly exhalations.

The microscope revealed to my eyes a new world within this jar. Myriads of new and strange forms of animal and vegetable life, of wonderous beauty and variety, sported through this miniature world.

The summer passed away and winter came, but my little vivarium still held its own. Some changes had occurred: some of the creatures had died, but others took their place. My salamander had disappeared, and I suffered a few other losses, but there were still enough to amuse and instruct me. I removed them to a smaller room, where they could get a few warm beams from the winter sun, and they lived on, regardless of the frosts and snows without, though perhaps somewhat chilled some of those cold nights when the fire got low. How much to be envied by their companions, now frozen up beneath the snow and ice!

It is now the end of March. My aquarium still thrives vigorously. The plants grow rapidly, though kept down somewhat by the snails feeding on their leaves. The caddis worms, enclosed in their snug fitting jackets, are pulling themselves around the bottom. The water beetles, "of activity inconceivable," scuttle about the vessel in hot haste. The sluggish snails crawl up the sides of the jar, or glide smoothly along the top of the water, rowing themselves along by their horns. But few deaths of any note have occurred during all the winter.

For a year now I have seen with admiring eyes the every-day life of these little creatures; and how richly has all my care and trouble been repaid!

Thanks to the untiring energy and patience of a few naturalists, the aquarium has within a few years been discovered and perfected, until now but little care and management are required to keep in our rooms, year after year, these "drawing room ornaments, flower gardens which never wither, fairy lakes of perpetual calm, which no storm blackens."—*Portland Transcript.*

SMALL POX AND VACCINATION.

Hall's *Journal of Health* has the following: "From extended and close observation, the following general deductions seem to be warranted: First, Infantile vaccination is an almost perfect safeguard until the fourteenth year. Second, At the beginning of fourteen the system gradually loses its capability of resistance, until about twenty-one, when many persons become almost as liable to small pox as if they had not been vaccinated. Third, This liability remains in full force until about forty-two, when the susceptibility begins to decline, and continues for seven years to grow less and less, becoming extinct at about fifty—the period of life when the general revolution of the body begins to take place, during which the system yields to decay, or takes a new lease of life for two or three terms of seven years each. Fourth, The grand practical use to be made of these statements is: Let every youth be re-vaccinated on entering fourteen; let several attempts be made, so as to be certain of safety. As the malady is more likely to prevail in cities during the winter, special attention is invited to the subject at this time."

☞ J. Smart, of Vergennes, Vt., sheared a yearling buck this season whose fleece, unwashed, weighed *seventeen and three quarters pounds*; and a four year old buck whose fleece weighed 11½ pounds; also an ewe sheep whose fleece weighed 9½ pounds.

For the New England Farmer.

NATURE, MAN'S TEACHER.

"Nature" and "the laws of Nature" are common terms of expression. And their very commonness may be one reason why they have not a more definite meaning in most minds. The different vegetable productions, animal beings, man, of the higher order of intelligences, and all other objects, material and spiritual, are only parts of a Universal Nature. And the nature of all is their essential constituent elements, properties, qualities and capabilities. Its fundamental laws are only their general forms of expression. God is the author of all things, and originally gave to each being and thing a perfect nature, subject to no law, wrong, conflicting with any other, or in the least opposed to universal harmony. Man's nature then was in consonance with the Divine will. One of its laws was progression. He must in his perfect state be ever rising higher and nearer to God. Right and wrong being revealed to him by sin, as a free agent he was permitted to choose either. But in whatever else he may have suffered by his estrangement, this law of progression remained the same. He ever advances, right or wrong; rises or descends; knowing no standing still point.

Nature, commonly understood, is the aggregate of God's works manifest to man on earth. These bear impress of His hand, and in studying them aright, the soul cannot fail to be purified in thought, feelings and aspirations. The mind will not be wholly absorbed in the works, but instinctively looks beyond; and through them, catches glimpses of the great Creator, God.—Therefore, to allow this law of progression in man full scope, to develop his intellectual faculties and raise his soul nearer to Divine knowledge and perfection, he was originally placed in close connection with these works in the garden of Eden. They were thus made his teacher, to show to him, in part, God's character and government and his consequent duty; in all of which he showed his ignorance in attempting to hide from the Lord. If, then, close and continued communion with Nature's works was to him a source of happiness, and that it was we know, as in his perfect state he had no sorrow, and if this condition was best adapted for his progression, these laws being unchanged, we may now expect the same results.

Nature shows to her student a broad field of knowledge where he can roam at pleasure. Presents to him subjects requiring more than a lifetime to fathom. And his moral feelings and intellectual taste are elevated in their study. Morning, noon and evening, her lessons are varied, interesting and beautiful. The glory of a summer's morn—when, riding forth on his course from the east, the god of day dispenses light and blessings to all, announced by ten thousand warblers caroling forth joyous notes of praise, and everything seems inspired with new life and attuned to harmonious melody—is unsurpassed by aught of man. And witnessing this, who that has a soul bearing anything of its original likeness, does not attest sympathy; and feel the deep fountains of joy and gratitude welling forth in his heart anew.

And when low in the heavens his chariot of fire descends, and the last rays play around the summits of the hills and dance through the topmost branches of the trees, the clouds burnished with a sea of glory, presenting to the eye a picture which could any artist copy, would immortalize his name—is an hour destined by God to be favored to man. These scenes make him forget the cares and disappointments of the day, and his soul, enraptured, drinks in the beauties before him.

> "Not rural sights alone, but rural sounds
> Exhilarate the spirit, and restore
> The tone of languid nature."

The effects of Nature's works ever harmonize. And the thoughts suggested by the scenes of closing day, are deepened by the gentle breeze, the hum of insects and the plaintive note of some bird calling to his mate.

This is the hour for reflection. Unlike the feelings of the morning, when Nature enlivens us for the duties of the day, we are moved to reflect on what has passed. Thus are not only our instructions varied throughout the day, but the whole year. Each season has its peculiar lessons. May not Nature then emphatically be called man's teacher? Such was she appointed in his perfect state; and now, with these laws unchanged, her lessons are the same, as she aids him in his upward flight. The well ordered mind cannot fail to appreciate her teachings, and acknowledge their divinity.

Man's object in life is happiness. In the thousand varied pursuits, the true expression of his soul is, make me happy. To attain this his character must be a perfect sphere. Each want must receive just and equal attention, and all his faculties the same cultivation. Those employments must be adopted favoring this. And if he follows the original laws of his being, accepts such employment, bringing him into daily connection with Nature's works, and he heeds her teachings, he will ever progress and enjoy happiness.

Wayland, 1858. L. H. SHERMAN.

For the New England Farmer.

SALTING ASPARAGUS.

MESSRS. EDITORS:—Forty years ago, when I bought my farm, I found a bed of asparagus upon it which furnished my family with a good supply yearly until lately. Having a desire to enlarge my beds, and improve the crop, I transplanted some into a new bed. I had read in the papers that salt was a "superior article" applied to asparagus, as a "fertilizer" which would invigorate and promote the growth of the plant. After my new bed had got well established in the soil, I supposed that salt and brine were about the same thing, and I sprinkled the latter pretty liberally on to my new bed, and from some cause the "fertilizer" saved us all trouble of weeding, for the plants never again showed their heads. My next experiment was upon the old bed, aged over forty years. I supposed my former success was owing to the application of brine instead of the genuine muriate of soda, and suspecting that brine was not salt, according to "book farming" I strewed the bed with salt till it looked white, and to my great gratification, the weeds surren-

dered in a hurry, and the next spring a few feeble spires of asparagus shewed themselves, intimating that they came to bid us a last farewell. The present season the old bed of half a century, and another about ten or twelve years old, salted at the same time, shew nothing but the remains of decayed roots. The salt was applied two or three years ago. And now, Mr. Editor, if some of your correspondents who are practical men at cultivating asparagus, would be so good as to tell me, and others, whether it was salt or some other mismanagement that killed my asparagus, they would do me and perhaps others a favor.

North Wilmington, June, 1858. S. Brown.

THE CONSTRUCTION AND ARRANGEMENT OF BARN-YARDS.

A well constructed barn-yard is the most important part of the farm. It is a kind of mine, containing elements of more intrinsic value than the gold of a "thousand hills." The size of the yard should be made, not merely according to the size of the farm, but with reference also to the collection of any materials which would increase the amount of the manure. Its line, and location as an enclosure for the confinement and convenient feeding of stock, would naturally be adapted to the situation of the buildings and adjoining fields; but as a place for making and saving manure, the main object is the manner of its construction. The border on every side should be high, with an inward slope, forming a reservoir sufficient to contain all the water which might in any way get into it, and with the bottom so compact that it could not penetrate the ground.

A yard so constructed would retain all the salts of the manures,—a large portion of which, according to the present practice of many farmers, is entirely lost. "The dark side of the picture" of a barn-yard, is that side where is frequently seen a black or copper-colored liquid running into the ditches by the roadside, or overflowing some already rich portion of the land, and lost for any useful purposes to the farm. The waste in this way, on many farms, is very great; and the annual loss to the farmers, by neglecting to provide suitable yards for the preservation of their manure is beyond estimation. But light on this subject is breaking into the minds of at least a portion of the farming community, and a better practice will eventually prevail.—*Genesee Farmer.*

Buckwheat Cakes.—The *American Agriculturist* contains the following hint on this subject, which is worth trying:

"Buckwheat cakes! one buckwheat cake differeth from another, yet not one in a thousand is made right. Yet, of all things, they are the easiest to cook, if the meal is prepared rightly. To three bushels of buckwheat, add one of good heavy oats; grind them together as if they were only buckwheat; thus you will have cakes always light and always brown, to say nothing of the greater disability and the lightening of spirits, which are equally certain. He who feeds on buckwheat may be grum and lethargic, while he of the oatmeal will have exhilaration of brain and contentment of spirit."

HOEING AND HAYING.

There are some errors committed on the farm —as there doubtless are in all occupations— which are continued more from the want of thought than as the result of ignorance. As a general thing, those persons who have been engaged in any particular business from their youth, are not those who investigate its interests, and ascertain what will facilitate or retard its operations, and consequently increase or diminish its profits. Is it not so with farmers? Is it those who have been bred to the farm, from their boyhood, and whose manipulations are as familiar to them as household words, who are the most inquisitive, who break away occasionally from old and questionable customs—or is it those who have had an innate and irrepressible love for the business from early life, and who have given the subject earnest thought, exercised constant observation, and searched the books to learn the practice of others? We have no doubt which of these two classes are among the progressive agriculturists of the land, and have had a large influence in effecting the important changes which have been wrought in farm management.

Such were the ideas that occurred to us when we took up the pen to say a word upon the subject of *hoeing*.

The work of *hoeing*, like that of acquiring knowledge, is never finished until the crop is matured, and nearly ready to harvest. No matter whether there are weeds or not, the crop is greatly benefited by repeated stirrings of the ground. If this is so, can that practice be a good one which divides off the season, giving a particular time for *hoeing*, and presuming that it must be finished within that period, in order that the period assigned for *haying* may not be interrupted?

We believe a grave error is committed by many in this respect—indeed, the fields themselves, in autumn, bear ample evidence of the fact—as pig weeds and Roman wormwood encumber the ground and rob the cultivated plants of the nutrition which is needed for their perfection.

When we had written so far, in looking over our exchanges, we found our views confirmed by a writer in the *Genesee Farmer*. Hear what he says:—

Haying and harvest will soon be upon us, and of late years they seem to come right in "hoeing time," but we would remind those who would raise corn or roots, and so far have done everything in good style, to weary not, but patiently continue their labors. We must remember that "growing weather" is as favorable to the growth of *weeds* as of valuable plants, and that on *no account* should we neglect to give clean culture to our hoed crops. Let us keep the cultivator going among them, if no more, so as to keep the soil

light and clean, even if we have to hire an extra hand in the hay-field. We are apt to forget how much cultivation has to do with the early growth of corn—with its "getting a start," so as to be able to feed itself from the food supplied in the soil. This is also true of potatoes—and we may add, beans, since our last year's experience in being hurried away into haying and harvest before finishing the hoeing of the whole crop. Had we hired it done, at two dollars per day, we should have made money in the increased product, as shown by the *clean* cultured over the weedy part. And what farmer cannot look back and see when he "missed it," in not being more thorough, even though it seemed as if he "couldn't afford it," at the time?

Let us urge the matter still. A few days in *finishing up* the culture of our hoed crops—which should all be done by the time they get one-quarter of their growth—is of vast importance in securing a well-ripened and heavy yield, and should by no means be omitted. We must not fail here, for these are important crops, and midsummer is *the pinch* with them as regards their value,—especially corn, which the frost hardly gives time to ripen, when the planting season is delayed as of late years. J.

Niagara Co., N. Y.

Do not, then, neglect the hoeing, in order to hurry into haying, but let the former lap a little into the latter, by cutting small pieces of early grass in the morning, but not so much but that it may be tended without entirely discontinuing the hoeing.

It is too costly an operation to plow land, manure, plant and cultivate it, until the crop is about half grown, and then leave it to its own fate, to struggle with hardy weeds, and lose the benefit from atmospheric influences which it would receive if the surface were in a proper condition.

Look at the practice—investigate it, and learn whether you can afford to neglect the crops already half grown, for the sake of beginning haying a week earlier.

For the New England Farmer.

DAIRY STOCK.

Who shall decide when doctors disagree?—Which has the greater influence in the production of superior stock for dairy purposes, the male or the female? I had supposed it was generally understood that the male was entitled to as much consideration as the female, until I saw it somewhere authoritatively quoted from the 28th page of the Secretary's Report on Stock, that "it is now conceded otherwise." If this be so, I should like to see the data from which the conclusion is drawn. Such has not been the judgment or observation of those with whom I have associated for the last thirty years. Such has not been the principle upon which premiums have been offered or awarded, so far as I have understood the matter. I admit this is an age of improvement, though I think the laws of generation are not essentially changed. *.

For the New England Farmer.

COLOR OF CATTLE.

MR. EDITOR:—In your paper of this month, I read an article signed "Inquirer," April 8, asking information respecting the various colors in horned cattle. I do not know that I can give much light on the subject, but it is matter that would be interesting to know about. It appears that in different sections of the country and all over the world the color varies somewhat. Cattle that are driven from the Western prairies for this market partake of grey, red and white, while in the New England States they are brown, red and black; I am induced to think it may be chance in cattle, as well as in other things.

I have raised this season two broods of chickens of the Golden Bantam breed, having but one male and two pullets, and no other fowls anywhere near, and the result has been from the first brood of eight chickens, five pure golden chickens, two white and one black; in the second brood of seven chickens, four pure golden, two black and one white. Now this must be chance, and why should not the same be chance in cattle as in fowls? Still it may be in crossing the different breeds of cattle, but we have Scripture authority that the different colors were produced by Jacob in taking rods of green poplar and of the hazel and chestnut tree, and pealed white streaks in them, and set the rods before the flocks in the gutters and watering troughs, and the flocks conceived before the rods, and brought forth cattle ring-streaked, speckled and spotted. I hope some one acquainted with the raising of stock will give some light on the subject.

OLD JACOB.

A STREET SCENE.

The other day, as I came down Broome Street, I saw a street musician playing near the door of a genteel dwelling. The organ was uncommonly sweet and mellow in its tones, the tunes were slow and plaintive, and I fancied that I saw in the woman's Italian face an expression that indicated sufficient refinement to prefer the tender and the melancholy to the lively "trainer tunes" in vogue with the populace. She looked like one who had suffered much, and the sorrowful music seemed her own appropriate voice. A little girl clung to her scanty garments, as if afraid of all things but her mother. As I looked at them, a young lady of pleasing countenance opened the window, and began to sing like a bird, in keeping with the street organ. Two other young girls came and leaned on her shoulder; and still she sang on. Blessings on her gentle heart! It was evidently the spontaneous gush of human love and sympathy. The beauty of the incident attracted attention. A group of gentlemen gradually collected round the organist; and ever as the tune ended, they bowed respectfully toward the window, waved their hats, and called out, "More, if you please!" One, whom I knew well for the kindest and truest soul, passed round his hat; hearts were kindled, and the silver fell in freely. In a minute, four or five dollars were collected for the poor woman. She spoke no word of gratitude, but she gave such a look! "Will you go to the next street, and play to a friend of mine?

said my kind-hearted friend. She answered, in tones expressing the deepest emotion; "No, sir, God bless you all; God bless you all" (making a courtesy to the young lady, who had stepped back, and stood sheltered by the curtain of the window;) "I will play no more to-day; I will go home, now." The tears trickled down her cheeks, and, as she walked away, she ever and anon wiped her eyes with the corner of her shawl. The group of gentlemen lingered a moment to look after her, then, turning toward the now closed window, they gave three enthusiastic cheers, and departed, better than they came. The pavement on which they stood had been a church to them; and for the next hour at least, their hearts were more than usually prepared for deeds of gentleness and mercy. Why are such scenes so uncommon? Why do we thus repress our sympathies, and chill the genial current of nature. by formal observances and restraints?—*Lydia Maria Child.*

For the New England Farmer.

HOW TO PREVENT BUGS FROM EATING VINES.

I notice in the *Farmer* of July 3, that Mr. S. L. BILLINGS, of Rockingham, Vt., has come to the conclusion that my method of preventing bugs from destroying vines will prove a hum-*bug;* well, it may be a humbug, used in the way he has used it from the tannery.

I do not use it in the way spoken of by him, but take it fresh from the poultry-house, and dissolve it in rain water, making it, when dissolved, about as thick as water gruel. I then set it in a sunny location, and it goes through a state of fermentation, and is then ready for use. I apply it once in three or four days, commencing with about three table spoonfuls, and increase the quantity as the vines grow larger. I have at this time 120 hills of squashes, and have not had one vine destroyed by the bugs this season. One of my neighbors, a Mr. LEIGHTON, who has followed gardening 44 years, now in his 66th year, considers it the best preventive ever used by him, and I must put him down as a practical gardener, for his whole life has been spent in raising vegetables for the market.

It seems to me that if the liquid used by Friend Billings had contained all of its former properties, that justly belonged to it before having been used for tanning purposes, that it could have been used repeatedly for the same purpose; but if it did not contain all of those properties, it certainly could not have had the same effect as the liquid used by me.

I am not opposed to using boxes, providing you do not have a better substitute. My vines are from ten to fifteen inches high, and the bugs have not been more plenty at any time this season, than at the present, and boxes from eight to ten inches high would scarcely cover them. If friend B. will try one hill the next season, fix it up as I have described, and apply it, and does not then change his mind, I will then confess that Vermont bugs, as well as Vermont horses, are hard to beat, and I will never again try to *cram* a humbug down his throat, which, by the way, Mr. Editor, my name should have been, instead of Crane. B. H. CRAM.

Eliot, July 6, 1858.

For the New England Farmer.

EAGLE MOWING MACHINE.

MR. EDITOR:—Very recently, I obtained a mowing machine of Heath's patent, manufactured by Nourse, Mason & Co., whose works are at South Groton, Middlesex Co., in this State.

Having closely observed the operation of this and other machines, while on trial in 1856,—separately at various places in the State, and then at the general trial at Northfield, in Franklin Co., for the premium of $1000, generously offered by the "Massachusetts Society for the Promotion of Agriculture," I was very favorably impressed with the movement of three of the machines on trial, but with the *work* of no one was I so much pleased as with that of the Heath Machine, to which was awarded the premium. If any one is curious to learn the reasons why the committee appointed to examine and judge of the merits of the several machines, so awarded the premium, they are referred to the report of that committee, an extract of which may be found in the Report of the Secretary of the Board of Agriculture, page 183, for the year 1856.

The reasons given in that report were sufficient in the minds of that committee, whose *special business* it was to attend on the work of the machines, examine their structure, &c., &c., to induce them to award the premium as they did, and they confidently believed that the opinion of gentlemen present on the occasion of the trial (except those interested in other machines) was in harmony with their own.

I say that I have one of the Heath machines, nor am I unhappily disappointed in the work of it. It does much better than, under the circumstances, I had reason to suppose that it would.

Two horses, strangers to each other and to the work, were put to the machine, and a driver wholly unaccustomed to the horses and to the machine, took his seat over the wheel and proceeded to an old field, with not very heavy grass, but hard to cut. The aborigines of this country were perhaps not more surprised when the *Mayflower* landed at Plymouth, than were the villagers of Shrewsbury, when they learned that a *mowing machine* had arrived. About two acres were soon cut, to the astonishment of those who witnessed the operation as well as those who examined the work when done.

One man remarked that he "had seen many machines operate at the West, but never saw one do the work so well as that."

The machine worked among cobble-stones to mow the last two of six to seven acres, without injury to the knives, which were not sharpened till the six to seven acres were mowed—though I would not recommend mowing where the stones are very thick.

It is very important to have horses for this work that are tempered alike, and that walk alike; if one is quicker than the other let him be put on the off side, and when the driver and his team become acquainted with each other and with the work, there is no danger to be apprehended on ground adapted to the use of the mower.

I am highly pleased with the machine, and think it to be an article that will in time come into pretty general use for mowing smooth sur-

faces. Until farmers have better prepared their grounds by removing the stones, &c., from them, one machine may answer for a neighborhood of farms, on all of which there are some fields that can profitably be mowed with the mower.

There are other and very good working machines in the market—machines well put together and attractive to the eye, but in my opinion, there is no machine that will do work so acceptably as the Heath (or Eagle) machine, to which a reaper may be attached without inconvenience.

THOMAS W. WARD.

Shrewsbury, July 10, 1858.

For the New England Farmer.

FARMING PROGRESSIVE.

MR. EDITOR:—By those who know nothing about it, we often hear it said that the enjoyments of the farmer are few, and that what he has are low and gross. At this day it need hardly be said, that this is untrue, and a libel upon the profession. There doubtless has been a time when there might have been more "truth than poetry" conveyed in the above, so far as the pleasure and position of the farmer were concerned, but this will not hold good at the present day. For myself, I can conceive of no other occupation which carries along with it so much of "nature and of nature's God," which has in it so much for *thought*, in fact, has every science combined, as the employments of the farmer. I mean, of course, a farmer in the broadest acceptation of that word. It would be needless to enumerate the different branches of knowledge which this embraces. The time has gone by, when to mention book farming, was to bring upon one the ridicule of the whole community. For the past few years, the change has been great in this respect, but no greater than the times demand. It wont do now to go to mill with the corn in one end of the bag and a stone to balance in the other. Farmers have found out that they might just as well, and with far greater profit, carry corn in both ends, as it not only saves time, "which is money," but is more economical in more senses than one.

An intelligence which answered very well a few years since, will not answer now. We live in stirring, changing, progressive times, and I am one of those who believe in this progress, not only in the science of farming, but in every other profession. Notwithstanding some of the "old fogy" cant of the day, I believe the world is progressing for the better, that mankind, as a whole, are more intelligent, wiser and better than they used to be; that the cultivation of the soil, the rotation of crops, the proper application of manures for the same, is becoming better understood, and being reduced to a science, and that this state of things will continue. As long as land is cheap, it cannot be expected that there will be that improvement made in the science of farming, as would be the case, if land was dearer and the population more dense. Something of this condition of things may be seen within a few miles of all our cities and larger towns. Here land is dearer, and there is, as a general thing, more *mind* brought into action, and the cultivation of the soil is more scientific, and more profitable.

We have reason to believe that this state of things will continue to spread wider and wider. True, it may be a very slow process, but it is a certain one, therefore I take it, that the interest and prospects in the future for the farmer are more encouraging now than they have been in the past. He should be posted up in his profession, and avail himself of those means of improvement which have stood the test of experience, in carrying on his operations. Among these, labor saving machinery is destined to perform a good part of the labor now done on the farm by human muscle, as well as a goodly share of that of the ox and horse. From the foregoing, we therefore deduce the following: We live in a "go ahead" age; one of improvement; that book farming is not to be discarded, and that there may be a better way than the old one, that the farmer who would keep himself and family well informed, and learn to manage his farming interest to the best advantage, must consult his books, and take at least one agricultural paper as good as the *New England Farmer*.

King Oak Hill, February, 1858. NORFOLK.

For the New England Farmer.

GUENON'S THEORY.

MR EDITOR:—One of your correspondents has expressed a doubt of the reliability of the Escutcheon theory of Guenon, because he cannot trace any connection between the position of the hair and the milking properties of the animal. This may be prudent—but if we are to believe nothing that cannot be fully demonstrated, the horizon of our knowledge will be much restricted.

If the coincidence has often been noted, and rarely failed, the presumption is in favor of the theory, though no connection may be traceable. Who is there that can fully explain the connection between the falling shower of rain and the green grass of the field? But still we certainly know that one follows and is caused by the other.

So much attention has this theory awakened on the continent of Europe, that a committee of eminent gentlemen in France was appointed to investigate it; and it was found to hold good in a large proportion of the cows that came under their observation—though not in every case. I think the purpose of your correspondent was to direct attention to other unintelligible notions that are abroad, quite as much as to the escutcheon of Guenon. Though I cannot say that I have full confidence in the theory, I think it entitled to careful examination. I find those who have given to it best attention, are most favorably impressed.

INQUIRER.

June 29, 1858.

EGGS.—Let it be understood that eggs may lose their nourishment by cooking. The yolk, raw or very slightly boiled, is exceedingly nutritious. It is, moreover, the only food for those afflicted with jaundice. When an egg has been exposed to a long continuance of culinary heat, its nature is entirely changed. A slightly boiled egg, however, is more easy of digestion than a raw one. The best accompaniment for a hard egg is vinegar. Raw eggs have a laxative effect;

hard boiled the contrary. There is an idiosyncrasy in some persons, which shows itself in the utter disgust which they experience, not only against the egg itself, but also against any preparation of which it forms an ingredient, however slight. Eggs should always be liberally accompanied by bread.—*Dr. Doran.*

TRAINING STEERS TO THE YOKE AND TO WORK

It is one thing to train steers to the yoke, and another to train them to work—even as knowledge of the theory differs practically from "knowing how," and *going through with it.* As in teaching human scholars, "one thing at a time" is better acquired, than a miscellaneous jumble of information, so it is in teaching steers, and the first object is to train them to wear the yoke and to obey the commands of the driver.

Four pair of steers can be trained at once, with nearly the same ease as one. The first step is to shut them into a well-fenced yard, with an area of from twelve to sixteen square rods, where the driver can stand in the centre and make the steers travel around him. They should be kept going in pairs or Indian file, until they will allow his approach—until they learn to be handled without fear, which is an important rudiment in the education of an ox. In doing this, the same patience and gentleness should be exercised which is expected of the teacher of a school—a patience which never yields to vexation. In a short time they will allow themselves to be yoked on either side, and can be driven anywhere, either in or out of the yard. Four days spent in this way, will better train steers to the yoke than four months of miscellaneous farm service, and they will be better cattle for all kinds of teaming, and sell for a higher price. The drilling in the yard should be continued until they can be driven with ease. To learn them to stand when left to rest, they need hitching as much as a span of horses.

When steers are trained to drive well in the yoke, the entirely different operation of training them to work should be commenced. This should proceed by degrees, with light loads and short journeys, until they give evidence of ability as well as knowledge. Oxen can be trained to work with as little expense to the natural spirits of the animal, as the horse, and it should be the aim of every ox-teamster, to train his cattle to work well without discouraging or abusing them.

Doubtless many of our farming readers are training steers to the yoke this season—will they adopt the rule, "one thing at a time," and break to the yoke before putting them untaught to drawing loads; and after a patient trial, report success or the want of it for our columns. One thing should be remembered—no farmer is competent to manage steers who cannot govern and manage himself.—*Country Gentleman.*

THE SEX OF EGGS.—M. Genin has addressed the Academie des Sciences on this subject. He says he is able, after three years' study, to state with assurance that all eggs containing the germs of males have wrinkles on their smaller ends, while female eggs are equally smooth at both extremities.

CURE FOR THE BITE OF A MAD DOG.

A frightful case of attack and biting of a child in the family of one of our friends recently, which the public in this region have generally seen, induces us to give the following remedy to cure the *bite of a mad dog*, which we hope will be carefully preserved. There is not a year passes in which some rabid dog does not go at large, biting cattle, sheep, swine and horses, and sometimes human beings, and spreading present terror and future anxiety through the neighborhood.

This remedy has no smack of quackery, and in our opinion is worthy of immediate application to any one who has been bitten, either recently or remotely.

A writer in the *National Intelligencer* says that spirits of hartshorn is a certain remedy for the bite of a mad dog. The wound, he adds, should be constantly bathed with it, and three or four doses, diluted, taken inwardly during the day. The hartshorn decomposes, chemically, the virus insinuated into the wound, and immediately alters and destroys its deleteriousness. The writer, who resided in Brazil for some time, first tried it for the bite of a scorpion, and found that it removed pain and inflammation almost instantly. Subsequently he tried it for the bite of a rattlesnake, with similar success. At the suggestion of the writer, an old friend and physician tried it in cases of hydrophobia, and always with success.

HOW A QUARREL WAS SETTLED.

The ancient family of Wolcott, in Connecticut was remarkable for clear-headedness, inflexible integrity, pungent wit and Christian principle. The following facts relate to the Hon. Roger Wolcott, who was afterwards Governor:

Expressing my surprise one day to Wolcott, that his satirical disposition had not got him into more scrapes, he told me he never was in but one that seriously alarmed him. It was with the late General M'Cormick. "We had passed the previous forenoon together," said Wolcott, "when something I said more severe than I ought to the General, roused his anger. He retorted. I was more sarcastic than before. He went away and sent me a challenge for the next morning. Six o'clock was the hour fixed upon; the ground to be the green at Truro, which at that time was sufficiently retired. There were no seconds. The window of my room, however, commanded the green. I had scarcely got out of bed to dress for the appointment, when, pulling aside the curtains, I saw the General walking up and down on the side next the river, half an hour before the time. The sun was just rising, cloudily, the morning bitterly cold; which, with the sight of the General's pistol and his attendance on the ground before the hour appointed, were by no means calculated to strengthen my nerves. I dressed, and, while doing so, made up my mind that it was great folly for two old friends to pop away at each other's lives. My resolution was speedily taken. I rang the bell for my servant girl: 'Molly, light the fire, instantly; make some good toast; let the breakfast be got in a minute, for

two.' 'Yes, sir.' My watch was within a minute of the time. Pistol in hand, I went out the back way from my house, which opened on the green. I crossed like a lion and went up to M'Cormic. He looked firm, but did not speak. I did. 'Good-morning, t'ye, General.' The General bowed. 'This is too cold a morning for fighting.' 'There is but one alternative,' said the General, distinctly. 'It is what you soldiers call an apology. My dear fellow, I would rather make twenty when I was so much in the wrong as I was yesterday; but I will only make it on one condition.' 'I cannot talk of conditions, sir,' said the General. 'Why, then I will consider the condition assented to. It is, that you will come in and take a good breakfast with me, now ready on the table. I am exceedingly sorry if I hurt your feelings yesterday, for I meant not to do it.' We shook hands like old friends, and soon forgot our difference over tea and toast: but I did not like the pistols and that cold morning, notwithstanding. I believe many duels might end harmlessly, could the combatants command the field as I did, and on such a bitter cold morning."

CAN CANCERS BE CURED?

We occasionally meet a person afflicted with that terrible disease, a cancer, and few things to which flesh is heir excite our sympathies more. Cancers have been cured, we believe, without the use of the knife, and perhaps some of those who assume the title of cancer doctors have succeeded in assuaging the pains of the disease, and in some cases, perhaps, effecting a permanent cure.

Not long since an article appeared in the Milwaukie *Free Democrat*, which the Providence *Post* thinks of sufficient importance to receive general notice. We agree with the *Post*, and therefore place on record the remedy, advising each reader to cut out the article and preserve it, as by so doing he may be able to minister to some suffering brother, and perhaps save life itself.

The statement of the *Democrat* is, that some eight months ago, Mr. T. B. Mason—who keeps a music-store on Wisconsin Street, and is a brother of the well known Lowell Mason—ascertained that he had a cancer on his face the size of a pea. It was cut out by Dr. Walcott, and the wound partially healed. Subsequently, it grew again, and while he was in Cincinnati on business, it attained the size of a hickory nut. He remained there since Christmas, under treatment, and now returns perfectly cured. The process is this: "A piece of sticking-plaster was put over the cancer, with a circular piece cut out of the centre a little larger than the cancer, so that the cancer and a small circular rim of healthy skin next to it were exposed. Then a plaster made of chloride of zinc, blood-root and wheat-flour, was spread on a piece of muslin of the size of this circular opening, and applied to the cancer for twenty-four hours. On removing it, the cancer will be found to be burnt into, and appear of the color and hardness of an old shoe-sole, and the circular rim outside of it will appear white and parboiled, as if scalded by hot steam. The wound is now dressed, and the outside rim soon suppurates, and the cancer comes out in a hard lump, and the place heals up. The plaster *kills* the cancer, so that it sloughs out like dead flesh, and *never grows again*. The remedy was discovered by Dr. Fell, of London, and has been used by him for six or eight years, with unfailing success, and not a case has been known of the re-appearance of the cancer, where this remedy has been applied."

EXTRACTS AND REPLIES.

QUINCE STOCKS, STRAWBERRIES AND VINES.

In the monthly *Farmer* for April I find some remarks by Col. Wilder upon pears on quince roots, and among them the following: "I have never discovered any difference as to the hardiness of the Angiers or the Fontenay quince, nor do I believe that one is preferable to the other as a stock for the pear."

Now I wish to inquire what variety is meant by the *Fontenay?* I have never before heard of that variety. I presume that he did not intend to give an impression that our common orange and pear quinces are as good as the Angiers as a stock for the pear.

What kinds of strawberries would you recommend one to cultivate for home use?

Can the plants be safely sent a considerable distance in August, and would they arrive in good condition if two or three days on the way?

Will not pumpkins and squashes mix with water and musk melons if planted within two or three rods of each other? JAMES.

Shirley, June, 1858.

REMARKS.—We have several kinds of strawberries under cultivation, and do not hesitate to say, the best among them all, *to take from the vines to one's own table*, is the old-fashioned WOOD strawberry; it is an English variety, which we have known from boyhood, and the same introduced here several years since—honestly, we have no doubt—by Mr. Newland. It is a great bearer, is hardy, *and continues in bearing about three weeks longer than strawberries generally do*, others bearing two weeks, and this from four to six weeks. In point of richness of flavor, no other strawberry compares with it for our palate.

Plants properly packed may be sent long distances without injury.

We have never noticed that squashes and melons would mix.

MILK, MORNING AND EVENING.

Which will yield the most butter, all other things being equal? I have seen it averred on the authority of a scientific journal published at Edinburgh, that the evening product is to the morning's as 5.42 to 2.17 per cent., that is, more than twice as much. If this be so, it must have been noticed by many a dairy-maid in her skimming operations. Perhaps this fact has some bearing upon the "gallon product," of

which mention has often been made. Will you have the goodness, Mr. Editor, to state how is the fact, if you know. *.

July 1, 1858.

DEATH OF YOUNG TURKEYS.

I wish to inquire through the columns of your paper what is the cause of turkeys dying in such numbers, when they are three and four weeks old—and if there is anything which will prevent this. One man in this vicinity has lost eighty in a very short time; if there is any remedy I should like to know what it is—as I have a number to come off soon, and I do not care to lose them all, if there is any help for it. A CONSTANT READER.

Warren, R. I., June, 1858.

REMARKS.—Wet and cold are the causes of the death of more young poultry, than all other causes combined, we think. Staggers, pip, moping and sore throats are generally occasioned by exposure to wet and cold. We have rarely known young chicks to die prematurely that were fed regularly on common coarse food, such as corn and cob meal, cracked corn or wheat, and allowed plenty of water, and *kept dry and warm.* Chickens or turkeys should never run in the grass when wet with dew or rain; if they do, they will almost certainly take cold and have some of the diseases common to young poultry.

STRAWBERRIES.

Will you please inform me of the best kind of strawberries for general cultivation, and where they can be obtained, and the price of the same, the best time to transplant them, and such other information as would be valuable to

A CULTIVATOR.

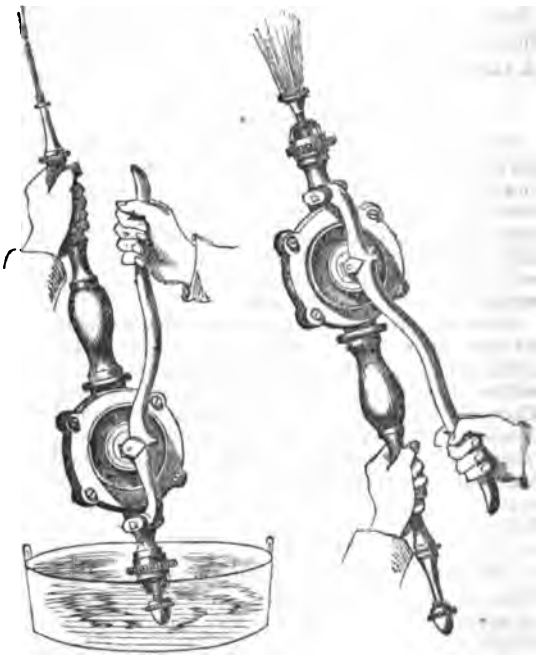
South Middleboro', July, 1858.

REMARKS.—We cannot do it—there is no accounting for tastes. If you get Brighton Pine, McAvoy's Superior, Hovey's Seedling, Monroe Scarlet, Burr's New Pine, Walker's Seedling, or Jenny Lind, you certainly will have a good variety. Plant on rich, moist land, and keep all weeds and grass out.

HAY CAPS, OR COVERS.—We have already seen tons of hay nearly ruined this season for the want of hay caps. If the season should be a "catching one," their entire cost may be saved on some farms. Remember, that a great deal of time is saved in not being obliged to dry hay *the second time,* as those are obliged to do, who do not use covers.

The Messrs. CHASES & FAY, 14 City Wharf, Boston, are making up and have sold nearly 20,000 caps this season! There are some *progressive* farmers on hand still. They have 60 sewing machines at work by steam.

GARDEN-SYRINGE, OR WINDOW-WASHER.



This is said to be a new and valuable article for syringing plants, watering gardens, washing windows, &c. By the cuts it will be readily seen that the article can be used from either end. To throw a constant stream, place the short end in the pail of water, or other liquid to be thrown, as shown by the cut on the left hand side, (the acorn-shaped cap being first screwed on to that end,) resting the end on the bottom of the pail, and holding it there while operating. In this way it can be used to throw a single stream; or by screwing the strainer on to the discharge pipe, it can be used for showering plants, &c.

If to be used simply for throwing liquid in jets for showering plants, &c., it is most effectually done by reversing the machine, as shown by the cut on the right hand side, by changing the acorn-shaped cap from the short to the long end, and placing the strainer on the short end and filling the machine by the same end, from the pail, and throwing the liquid as shown by the cut through the strainer; or by dispensing with the strainer throw a single stream, as the case may require. The machine is always filled from the short end: but can be used to discharge from either end, as shown by the cuts, always having the acorn-shaped cap screwed on to the opposite end from the one to be discharged from. The strainer or nose can be used on either end.

These machines are invaluable for using to throw on liquid compositions, such as whale-oil soap-suds or tobacco-water, for destroying insects on roses and other plants, &c. &c.

We have not used, or seen used, this syringe, and can only give what others say of it. We think, however, it may be a convenient and useful article. Price $3. For sale by *Parker, White & Gannett*, Boston.

FIRST RATE WHITEWASH.

The editor of the *American Agriculturist* says he has tried various preparations for whitewashing ceilings, and the walls of unpapered rooms, but has never found anything that was entirely satisfactory until the present spring. He has now something that affords a beautiful, clear, white color, and which cannot be rubbed off, and which he prepares in this wise:

"We procured at a paint store a dollar's worth of first quality 'Paris white'—33 lbs., at three cents per lb.—and for this quantity one pound of white glue, of the best quality, usually called Cooper's glue, because manufactured by Peter Cooper, of New York. Retail price 50 cents per pound. For one day's work, half a pound of glue was put in a tin vessel, and covered with cold water over night. In the morning this was carefully heated until dissolved, when it was added to 16 lbs. of the Paris white, previously stirred in a moderate quantity of hot water. Enough water was then added to give the whole a proper milky consistency, when it was applied with a brush in the ordinary manner. Our 33 pounds of Paris white and one pound of glue sufficed for two ceilings, and the walls and ceilings of seven other small rooms.

"A single coat is equal to a double coat of lime wash, while the white is far more brilliant than lime. Indeed, the color is nearly equal to that of 'zinc white,' which costs at least four times as much. We are satsified, by repeated trials, that no whitewash can be made to adhere firmly without glue, or some kind of sizing, and this will invariably be colored in time with the caustic lime. The Paris white, on the contrary, is simply pure washed chalk, and is entirely inert, producing no caustic effect on the sizing. Any of our readers who try this, and are as well pleased with it as we are, will consider the information worth many times the cost of an entire volume of the *Agriculturist*. Had we known of it when we first 'set up housekeeping,' it would have saved us much labor, and the annoyance of garments often soiled by contact with whitewash—not to mention the saving of candles, secured by always having the ceiling white enough to reflect instead of absorbing the rays of light."

THE DAILY LIFE OF MILTON.

In his mode of living, Milton, as might be anticipated, was moderate and temperate. At his meals he never took much of wine or any other fermented liquor, and he was not fastidious in his food; yet his taste seems to have been delicate and refined, like his other senses, and he had a preference for such viands as were of an agreeable flavor. In his early years he used to sit up late at his studies; and perhaps he continued this practice while his sight was good; but in his latter years, he retired every night at nine o'clock, and lay till four in summer, till five in winter; and, if not disposed then to rise, he had some one to sit at his bedside and read to him. When he rose, he had a chapter of the Hebrew Bible read for him; and then, with, of course, the intervention of breakfast, studied till twelve. He then dined, took some exercise for an hour—generally in a chair, in which he used to swing himself—and afterwards played on the organ, or the bass-viol, and either sang himself or made his wife sing, who had a good voice but no ear. He then resumed his studies till six, from which hour till eight he conversed with those who came to visit him. He finally took a light supper, smoked a pipe of tobacco, and drank a glass of water, after which he retired to rest.—*Knightly's Milton.*

SMILES.

A pleasant smile to light the eye,
And fill the heart with gladness,
To chase away the tears of grief,
And hush the sigh of sadness;
To lend the face a fairer charm,
A soul of love expressing,
That to earth must divinely bring
A comfort and a blessing.

O, smiles have power a world of good
To fling around us ever;
Then let us wear their golden beams,
And quench their ardor never.
For while a smile illumes the eye,
And wreathes the lip of beauty,
The task of life must ever be,
A pure and pleasant duty.

For the New England Farmer.

DEPTH OF PLOWING.

Noticing in the *N. E. Farmer* an article by J. W. PROCTER on the depth of plowing which so nearly accords with my experience, I will add that, in my opinion, much benefit would result from a judicious deepening of the soil at each succeeding plowing, although on some soils more benefit I think would be found from subsoiling than from very deep plowing.

The roots of plants extend farther and deeper, in search of nourishment than many suppose. I have been told upon reliable authority that the roots of the onion have been traced from two to three feet. I have traced the roots of apple trees in a nursery to the depth of four feet, which proves to my mind that we need not fear stirring the soil too deep; and not to bring too much of it to the surface, and especially at one time. I have experienced a very marked improvement upon spring-wheat when it was subsoiled, except three furrows; these grew less vigorously through the season than where the ground was stirred to the depth of eighteen inches. I am satisfied that all plants prefer a deep soil. P. TABER.

Vassalboro', Me., July 7, 1858.

REMARKS. — The opinion advanced by Mr. PROCTER, and now confirmed by Mr. TABER, is fast gaining ground, even among farmers who are usually not in haste to change their opinions on any subject. *"Stir the Soil,"* would be an excellent motto, for a conspicuous panel in the farm-house.

Healthy roots are great travellers—they have

the power of choice, and will sometimes turn and go directly backwards, if the favorite bone of some prudent dog has been buried behind their onward course, or if some gushing spring or water-course breaks out in their vicinity. We do not suppose they hold a conversation, and resolve what course they will pursue, but go where they find the best pasturage, as naturally as the branches of the tree shoot upward.

An observing gentleman told us the other day that early in the spring he observed a beautiful shagbark walnut tree standing in the bank of a deep cut excavated for a railroad, and that he determined when the proper time arrived to transplant it. On digging he found the *tap-root* near the edge of the bank so that it was easy to reach it. He dug to it, then followed it carefully down, and found it extending *four feet* below the surface, so that there was just as much root as top! It was properly set and is now growing well.

Would not apple trees be much better planted and tended where they are to stand, having all the *tap-root* that nature gives them?

THE GREATEST FARMER IN THE UNITED STATES.

On the 18th of December, ult., we published the following sketch of what was supposed to be the largest and most profitable farm in the country. We published it then, well knowing we could soon procure items here, in California, that would far excel it. Here is the Great Farm in Texas:

"AN EXTENSIVE FARMER.—A correspondent of the Silver Creek *Mirror* says that Col. Jacob Carroll, of Texas, is the largest farmer in the United States. He owns 250,000 acres of land (nearly 400 square miles,) in that and adjoining counties. His home plantation contains 8000 acres, nearly all valuable bottom lands, along the Guadalupe river. On this farm he has over 600 acres in cultivation, on which he raises annually about 300 bales of cotton, worth at the plantation from $75 to $100 per bale, and 20,000 bushels of corn, worth about 50 cents per bushel. He has a force of about fifty field hands, and he works about sixty mules and horses, and fifteen yoke of oxen. Col. Carroll has, on his immense ranges of pasture lands, about one thousand horses and mules, worth $50,000; one thousand head of cattle, worth $7000; six hundred hogs, worth $2000; three hundred Spanish mares, worth $15,000; fifty jennies, worth $2000; fifteen jacks, worth $9000; and five stallions, worth $2500. Col. Carroll's property, in stock and negroes, is worth at least $150,000; and the value of his landed estate will swell the amount to over half a million of dollars. His annual income from the sale of stock amounts from $5000 to $10,000; and from the sale of cotton, to from $15,000 to $20,000."

And here we present the following:

A. P. Smith, of Smith's Pomological Gardens, at Sacramento, on the American river, cultivated about sixty acres the last year; about fifty acres in orchard, nursery and flower garden, and ten acres in a vegetable garden.

Mr. Smith employs from twenty to forty men; runs one team in the spring to the mines with vegetables, one team twice a day to the city with vegetables, and in the fruit season keeps a team constantly going to the mines. He has agencies for the sale of his splendid peaches in San Francisco, Marysville, Stockton and Sacramento; and we learn that the gross amount of his sales in the year 1857, exceeded the round sum of $60,000.

What will our great planters and farmers say to this? We can give them the particulars, if they need it.

Each year of those famous gardens only increases the amount. This should teach men who are laboring on their thousand, or five thousand acres, that it is the "little farm well tilled," and not the great Spanish grant that covers all out doors, that makes the money or brings prosperity. If all our large grants were cut up into small farms, our State, and all, would be better off.

California Farmer.

THE MILK BUSINESS.

The *Springfield* (Mass.) *Republican* furnishes the following facts in relation to the supply of milk for that city:—

We have made an effort to learn some of the aggregates of this industry; to compare the average quantity of milk per cow in each herd; to learn the different methods of feeding; all points of curious interest and suggestive value. For this purpose circulars have been addressed to most of the milkmen of this city, of course with varying success. All have not answered, but yet enough have done so to give a nearer estimate than otherwise would be possible. Not far from 2,000 qts., or $100 worth, are sold daily through the year. The highest quantity sold by any one milkman, in the best of the season, so far as is known, is 400 qts. daily, and this man, in the average for the year, is put down at 250 qts. Taking all the milkmen, the average is 166⅔ qts. each, daily. To raise this milk requires a herd of 390 cows, which give, on an average, about seven quarts each. The highest quantity given by extraordinary cows ranges from 20 to 25 qts. The force requisite to carry on this business, equals one man for every six cows, or an aggregate of fifty men, summer and winter. The best milkers, generally, are crosses of Short-Horn with Ayrshire and Natives, but good milkers can be found of almost every breed.

The feed that produces the most milk is yet a vexed question. In the opinions received, cotton seed meal, corn, rye and buckwheat ground together, and roots, with rowen hay, have equal prominence. The order of feeding cows varies with different individuals. Some feed roots the first thing in the morning, and others late at night. Each feeder gives his practice and reasons with equal freedom—a hopeful symptom in any debate. Our conclusion is, that the best order is as follows: wet cut feed mixed with meal after each milking, with hay and roots between. Neither roots nor grain should be fed upon an empty stomach. In the first case, the milk is more likely to receive the odor of the roots. In

the latter the appetite is greatly impaired for other food. No fact is more clearly established than that the flavor and quality of the milk and flesh depend in part upon the flavor and quality of the food. Various expedients have been resorted to, to counteract bad flavors. The English heat their milk and then add saltpetre to it to prevent the taste of cabbages. The Virginians slice and salt ruta-bagas, twelve hours before feeding, to escape that odor. In this region, regularity in feeding, as to quantity and time, by some is considered sufficient remedy for common turnips. Experience proves that corn and carrots make first quality beef, and corn and potatoes first quality pork. Cows that give milk require more food in proportion to their bulk than either oxen or horses; twenty-five to thirty pounds of dry hay daily is the usual consumption of farm animals. Of course, if roots or meal are added the consumption will be less.

For the New England Farmer.

GLASNEVIN MODEL FARM, IRELAND.

BY HENRY F. FRENCH.

On the 22d of August last I visited this establishment, which is situated at about three miles distance from Dublin. Dr. Kirkpatrick, the superintendent, was absent, but his accomplished lady, who, by the way, is an American, from Baltimore, and is manifestly a valuable helpmate, in more senses than one, was kind enough to show me over the house, lecture-rooms, halls, dormitories, milk-room, and the like, and to give me much valuable information. It was a source of no little satisfaction to find one of my countrywomen, thus unexpectedly, presiding so gracefully and usefully over such an institution in a foreign land. It is an almost hopeless task to attempt to give any correct idea of the system of education which has been undertaken for Ireland. The twenty-second report of the Commissioners of National Education in Ireland has been kindly presented to me. It consists of two octavo volumes closely printed, full of figures and statistics, containing eight hundred and sixty pages!

It appears that there were at the close of the year 1855, in operation in Ireland, 165 agricultural schools of all kinds. Of these 37 were model farm schools, 46 ordinary agricultural schools, three "school gardens," and 79 "workhouse schools." Twenty of the model schools were under the exclusive management of a Board of Commissioners. One of this number is the "Albert National Model Farm School," at Glasnevin, to which I made the visit referred to. It may as well be stated here that the total expenditure on the several agricultural schools and farms in Ireland for the year 1855 was about $55,000, of which about $20,000 was returned in receipts from the produce of the farms and the like.

At the twenty model farms, about four hundred pupils were taught in 1855. These farms are conducted for the public account, by an agriculturist, under the direction of the Board, and the most accurate accounts are kept of all pecuniary affairs, as well as of all experiments and farm operations.

The Albert institution may be taken as a representative of this class of farm schools. It was established in 1838, and is designed to supply such instruction both in the science and practice of agriculture, as will qualify young men for discharging the duties of teachers of agriculture, land-stewards, farmers, &c.

It should be kept in mind, that in England most all of the land is owned by lords and gentlemen, who have often many thousands of acres, divided into farms, which are leased to farmers. These farms are of various sizes, from one hundred to a thousand acres or more. The proprietors usually have little or no personal care of their lands, often not setting a foot on to one of their farms for years, but leaving to a steward the whole matter of leasing and superintending the whole estate. The farmers who hire their farms are often men of large capital. Indeed, the business of farming in England is conducted with an amount of labor and expenditure of which we in America know nothing. In Lincolnshire, it requires a capital of about fifty thousand dollars to enter upon and profitably farm a thousand acres of land. These farmers are merely tenants. They own no interest in the land, but hire it, at perhaps an average of five dollars an acre rent, annually. To train up stewards and farmers for such employments as these, is a principal object of the model farm schools.

It will be seen at once, that a thorough training, not only in the practical operations of plowing, sowing, tilling, harvesting, fencing, draining, and the like, is necessary, but also, a good education in arithmetic, book-keeping, animal and vegetable physiology, chemistry and business affairs.

The farm contains about 180 acres. Mr. Coleman visited it in 1844, when it contained but 52 acres, and before the present buildings were erected, and his reports contain an interesting notice of it, as it was then in operation upon a much smaller scale than at present. Ninety pupils were there under instruction in 1855. In order to teach pupils the practical labors of the farm, every one is required to take a part in every operation, including the feeding and management of the live stock. With a view to exemplify the most approved systems of culture, various rotations of cropping are followed upon separate divisions of the farm. The system of house-feeding cattle is pursued both summer and winter. The arrangements afford the pupils the best

opportunity to obtain information upon every branch of the business of farming, including dairy husbandry, the fattening of cattle, the breeding of stock, the various operations of field culture, and the permanent improvement of the soil.

The new buildings erected in 1853 comprise dormitories, dining-hall, lecture and school-room for seventy-five resident pupils, museum, library and laboratory, a comprehensive range of farm offices and apartments for the superintendent, matron, land steward, literary teacher and servants. Everything was, at the time of my visit, in the nicest order about all these apartments, as also about the stables and other farm buildings. The superintendent has general charge. The agriculturist, assisted by an efficient land steward, carries out the practical working of the farm, under the direction of the superintendent. The literary instruction of the pupils is conducted by two competent teachers, and a gardener of practical experience has charge of the horticultural department. The course of instruction includes surveying, levelling, and mapping.

Two classes are admitted into the institution. The first consists of two divisions, one of which is composed of young men who intend to become land stewards or farmers, and who are boarded, lodged and educated, at the public expense. For admission to this division the applicant must pass the proper examination, be seventeen years of age, of sound constitution and free from disease, and produce satisfactory certificates of good character. The period of training for this division is two years. The second division of this class consists of teachers who are qualifying themselves for conducting agricultural schools. These are also supported like the others at public expense, and are admitted on satisfactory evidence of character, and of having been properly trained in the literary department. The instruction in this division extends only to one year.

The second class is composed of young men who board and lodge at their own expense in the immediate neighborhood of the farm. They are admitted on condition that they engage in the ordinary farm work, attend punctually all the lectures, be amenable to the regulations, and pay an entrance fee of two guineas, or about ten dollars and a half. This class remain as long as they choose.

The general regulations provide that all shall attend punctually all recitations, shall "wear slippers always within doors, and school-coats when at study, and never to wear them out of doors," that they shall not smoke or use spirituous liquors, nor become a member of any political society, nor take part in any meeting of a sectarian character.

Both classes are required to engage in all descriptions of farm labor, to take due care of implements, &c., and are liable to be called on for extra work at any busy season of the year. Yard officers are appointed from the pupils, in their turn, to feed, clean, and otherwise attend to the live stock, and to keep the farm-yard and offices clean and neat. Each pupil is required, in his turn, to take charge of a horse, which he is to clean and litter. The entire classes are divided into two divisions, which are so employed, that while one is at work, the other is, in turn, at study.

The farm at Glasnevin appears to be under the highest order of cultivation. The finest crops of wheat, oats, and of roots were upon the ground when I was there. The mangold wurtzel crop appeared to be the finest I had ever seen. This crop, by the way, is becoming a favorite in Great Britain, and all agree that it is one of the most valuable that can be cultivated.

They are fed to horses, sheep, cattle and swine. I visited one milk establishment, where in June, three hundred and fifty cows each received a bushel per day. The longer they are kept the better they become. It is a crop well suited to our hot, dry summer, and is easily cultivated. Mr. Boyle, who, I think, is the agriculturist of the establishment, partly promised to furnish me with a statement of his mode of cultivating the mangold. H. F. F.

P. S. Months ago, this letter was left unfinished. Since then, Mr. Boyle has redeemed his promise, and furnished me with a valuable treatise on the culture of mangold wurtzel, which has been, in part, laid before the public in America. Experiments are in progress all about us, with this crop the present season, and by another seed-time we shall be able to judge correctly of its value. This letter is already too long for additional remarks.

PRESERVING GRAPES.

Charles Campbell, of Aurora, Cayuga county, N. Y., communicates to the *American Agriculturist*, the following method of preserving grapes:

"When they are fully ripe, suspend the basket by a strap or cord passed around the neck, thereby giving liberty to both hands for picking: with one hand hold the cluster, and with the other remove it from the vine; remove from the clusters all unripe or decayed fruit, and deposit them in the basket until it is filled. (I use a market basket that will hold about a half bushel.) Carry the grapes thus gathered to the place for packing. I use boxes about two feet square by six inches deep in the clear, with covers made to shut tight. In packing, lay a newspaper on the bottom of the box, then a layer of grapes, then a paper and second layer of grapes, which, when closely packed fills the box; set in some dry, airy place, with the cover off and let the box remain

open for ten days, or until the sweating process is passed; then close the box and set it in the fruit-room, cellar, or garret, any place where they will not freeze, or which is not extremely damp.

"Grapes packed as above directed, will open at any time during the winter or spring following as fresh as when packed. The only secret or mystery is, that the moisture which spoils the fruit when packed in saw-dust and other absorbents, passes off during the ten days that the box remains open, instead of being absorbed, and ultimately moulds and spoils them. So perfect has been my success that I have more confidence in the preservation of the grape than any other fruit. I use shallow boxes for packing grapes, that the moisture may more readily escape, and that the first layer in the bottom may not be crushed by the weight above."

AMERICAN POMOLOGICAL SOCIETY.

The Seventh Session of this National Institution will commence at MOZART HALL, 663 Broadway, in the CITY OF NEW YORK, on Tuesday, the 14th day of September next, at 10 o'clock. A. M., and will be continued for several successive days.

Among the objects ot this meeting are the following: To bring together the most distinguished Pomologists of our land, and, by a free interchange of experience, to collect and diffuse such researches and discoveries as have been recently made in the science of Pomology—to hear reports of the various State Committees and other district associations—to revise and enlarge the Society's catologue of fruits—to assist in determining the synonyms by which the same fruit is known in America or Europe—to ascertain the relative value of varieties in different parts of our country—what are suitable for particular localities—what new sorts give promise of being worthy of dissemination—what are adapted to general cultivation; and, especially, to concert measures for the further advancement of the art and science of Pomology.

The remarkable and gratifying progress which has recently been made in this branch of rural industry, is in no small degree attributable to the establishment and salutary influences of our Horticultural and Pomological Societies, the proceedings of which have been widely promulgated by the press. A great work has been already performed, but a greater still remains to be accomplished. It is, therefore, desirable that every State and Territory of the Union and the Provinces of British America should be ably and fully represented in this convention, and the Pomological, Horticultural, and Agricultural Societies, within these limits, are hereby requested to send such number of delegates as they may deem expedient. Nursery-men, fruit-growers, and all others especially interested in Pomology, are also invited to be present, and participate in the deliberations of the meeting.

Held as this assembly will be, in the great commercial emporium of our country, easily accessible from all parts of this continent, and at the same time when the convention of the editors of the Agricultural press will be in session, it is anticipated that the attendance will be larger than on any former occasion, and the beneficial results proportionably increased.

In order to increase as much as possible the utility of the occasion, and to facilitate business, members and delegates are requested to forward specimens of fruit grown in their respective districts, and esteemed worthy of notice; also, papers descriptive of their mode of cultivation—of diseases and insects injurious to vegetation—of remedies for the same, and to communicate whatever may aid in promoting the objects of the meeting. Each contributor is requested to make out a complete list of his specimens, and present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable after its organization.

For the purpose of eliciting the most reliable information, the several fruit committees of States, and other local associations, are requested to forward to Hon. Samuel Walker, general Chairman of the Fruit Committee, Roxbury, Ms., or to P. Barry, Esq., Secretary of the Society, Rochester, N. Y., a definite answer to each of the following questions, at an early date, and prior to September 1st:

What six, twelve and twenty varieties of the apple are best adapted to a family orchard of one hundred trees, and how many of each sort should it contain? What varieties, and how many of each, are best for an orchard of one thousand trees, designed to bear fruit for the market?

What six and twelve varieties of the pear are best for family use on the pear stock? What varieties on the quince stock? What varieties, and how many of each of these, are best adapted to a pear orchard of one hundred or of one thousand trees?

What are the six and twelve best varieties of the peach for a family orchard? What are the best varieties, and how many of each best adapt- to a peach orchard of one hundred or of one thousand trees?

Answers to these questions should be made from reliable experience, and with reference to the proximity or remoteness of the market.

Societies will please transmit to the Secretary at an early day a list of the delegates they have appointed.

Gentlemen desirous of becoming members can remit the admission fee to Thomas P. James, Esq., Treasurer, Philadelphia, who will furnish them with the Transactions of the Society. Life Membership, twenty dollars; Biennial, two dollars.

Packages of fruits may be addressed to WM. S. CARPENTER, Esq., 468 Pearl Street, N. Y.

MARSHALL P. WILDER, *President, Boston, Ms.*
P. BARRY, Esq., *Secretary, Rochester, N. Y.*
July 1, 1858.

SEASONABLE INFORMATION.—Apart from the advantages of bathing in salt water, the inhalation of sea air has a salubrious and beneficial effect, which is most apparent upon those who resort to the coast from towns or from inland districts. It has been shown by Prof. Faraday and other chemists that oxygen in the particular condition known under the name of "ozone," exists in large proportion in sea air. Though air impregnated with the saline of the sea is found too

strong for some persons, in the great majority of cases an occasional visit to the coast is a capital restorative of vital power to those whose nerves are exhausted by long sojourn in inland towns.—*Scientific American.*

ENTOMOLOGY.

The word *entomology* is derived from two Greek words, *entoma* and *logos*, which signify discourse and insects, a term implying a knowledge of insects. There are various classifications of the insect tribes, and the arrangement has perpetually varied since the days of LINNÆUS, to the present time. That able naturalist classes them from the wings; FABRICIUS, from the peculiarities or contours of their mouths, and LATUILLO from their general physiological structure. KIRBY, more recently, has adopted the locomotory organs, or legs, as the basis of classification. KOLLER describes insects as "animals which have a body consisting of one or more divisions; articulated feet; a head conspicuously distinct from the body, on which are placed two movable horns, called antennæ. They breathe through air holes, which are situated on the sides of the body, the greater number having wings, in their perfect state, and only a proportionably small number are without them.

"With the exception of certain groups, all insects have six feet, and their bodies are divided into a head, thorax and abdomen, by notches or incisions; hence the name insect is derived from a Latin word, signifying *to cut*, or *notch*. Before they attain their perfect state, they are subject to various transformations, which are called metamorphoses."

DECANDOLLE, and, if we mistake not, some other writers, have estimated the number of insects that derive their nutriment from herbivorous vegetation, or plants, to amount to not less than one hundred thousand species. Some of these are partial to feed only on one kind of plant, while others devour indiscriminately almost every tender and sapid vegetable that falls in their way.

This is the case, to a certain extent, with the grasshopper, and more emphatically so with the locust, which, in the language of Scripture, may be said to devour every green thing. It is a matter of deep regret, that a department of knowledge so intimately associated with agriculture, is so little attended to, and so imperfectly understood. Of the habits, and even the names of the almost innumerable insects that prey upon our crops, we may be said to know comparatively nothing. This is not as it should be. If we know not the habitudes of our enemies, we shall scarcely be able to contend successfully with them in their attacks upon our fields and fruits.

While the loathsome *cimex lectularius*, common bed or chinch bug, which infests the domains of the housewife—obtruding itself into

"Scenes sacred to neatness and repose,"

is cautiously destroyed, the residue of the Hemipterous family is allowed the free liberty of our fields and gardens, carrying ruin and destruction wherever they go. Patiently we replant where they destroy, never reflecting that a few hours' study would enable us, perhaps, to destroy them, and preserve, uninfested, the produce of our toils, and the beauty of our fields.

The destruction of birds, which is encouraged by many, is a practice that cannot be too severely deprecated, as it tends directly to the multiplication of the vermin which prove so destructive to many of our most valuable fruits and field products. A single robin—it is said—will, in one season, destroy as many worms as would, if permitted to feed upon our vegetables unmolested, lay waste whole fields. Yet these useful laborers are massacred without pity or compunction. It is to be hoped that our people will reflect upon this matter, and introduce a proper and effectual corrective. It certainly behooves them to throw around their crops every available protection, and as one of the cheapest and most efficient means of securing this result, we would recommend the preservation and protection of birds.

THE CULTIVATION OF TEA.—The Washington correspondent of the New York *Times* says that the Agricultural Bureau of the Patent Office is making preparation to test the cultivation of tea in this country. The seed will be preserved in China specially for this purpose, planted in glass cases and shipped in October. By the time of their arrival here they will have sufficiently sprouted to be set out in beds. After being tested here, the plants, if successful, will be distributed among the Southern States. An order for a great variety of seeds will also be sent to Egypt in a few days, through a house in London. This list includes wheat, barley, rice, clover, (Trifolium Alexandrium,) &c. &c. Arrangements are also making to commence a nursery for the growth of ornamental trees for the public grounds of this and other cities. They can be supplied from a public nursery at one-twentieth their present cost. Such is the estimate of the Interior Department.

SOAP-SUDS FOR CURRANT BUSHES.—A writer in the *Indiana Farmer* says he has done well with currant bushes. He attributes his special success to the fact that he has made a liberal use of soap-suds and chamber-lye about their roots in the summer time. Some of his bushes are seven feet high.

APOPLEXY.—Persons below the middle height, robust, with large heads and short, thick necks, are generally recognized as apoplectic subjects; but a foreign medical author asserts that it is confined to no particular conformation of the body, *all persons* being alike liable to be attacked by it. The predisposing causes are the habitual indulgence of the appetite in rich and gross food, or stimulating drinks, coupled with luxurious and indolent habits; sedentary employments carried to an undue length; the habit of sleeping, especially in a recumbent posture, after a full meal; and lying too long in bed. Persons, however, who are predisposed to this disease should not fail to profit by the warnings of its approach, such as giddiness, drowsiness, loss of memory, twitching of the muscles, faltering of the speech, &c. Their diet should be light and nutritious; and luxurious habits should be abandoned, and moderate exercise should be taken. Above all, they should avoid giving way to their passions, as it is well known that many persons have been struck with death in the midst of a fit of anger. —*Scientific American.*

BOARD OF AGRICULTURE.—At the quarterly meeting of the Massachusetts Board of Agriculture, held at Westboro' on Wednesday, Messrs. Fay, Lathrop and Grinnell were appointed delegates to the National Horse Show, at Springfield, on the 14th, 15th, 16th and 17th of September. Gov. Banks, Chairman of the Board, and Messrs. Marston, Wilder, Atwater, Sutton, Flint, Brooks and French, were appointed delegates to the National Exhibition at Richmond, Oct. 26th, 27th, 28th, 29th and 30th.

EDDY ON BEE-CULTURE, and the PROTECTIVE BEE-HIVE. By HENRY EDDY, M. D., North Bridgewater, Mass. This is a neatly-printed pamphlet of 60 pages, containing a good deal of valuable information on the subject of Bee-Culture. Dr. Eddy's Hive is a good one, and he is doing his fellow-men much service in disseminating the knowledge he has acquired by long practice and earnest zeal, in this interesting branch of rural economy.

BOYS' DEPARTMENT.

IS HEALTH PROPER FOR YOUNG LADIES?

Enter Mrs. FLUSTER and Miss MENDUM, meeting.

Mrs. Fluster.—This is Miss Mendum, I believe.

Miss Mendum.—The same, madam.

Mrs. F.—And I am Mrs. Fluster.

Miss M.—The aunt of my little pupil, Ruth Penway?

Mrs. F.—The same.

Miss M.—Be seated, madam. *(They sit.)*

Mrs. F.—I have come, Miss Mendum, to expostulate with you on the course you are pursuing in regard to my niece's education.

Miss M.—I shall be happy to receive your suggestions. You are aware that Mr. Penway, on going to Europe, confided his daughter to my charge, making me promise that I would bring her up as I would my own child. I assure you I feel the responsibility of the office.

Mrs. F.—Ah! if you had had my maternal experience, you would have been more careful in guarding her from the coarse, vulgar habits into which she has fallen.

Miss M.—Coarse, vulgar habits! There is no more lady-like girl in my school. What do you mean, madam?

Mrs. F.—I mean what I say. You need not put on that dignified air, miss. I know who your father was!

Miss M.—All the world may know that, madam. He was a good carpenter, and an honest, intelligent man. But let us keep to the point. What are these coarse, vulgar habits of which you speak?

Mrs. F.—Why, miss, when my brother-in-law sent Ruth to you, three years ago, she was as delicate, refined, pale-faced a child as one would wish to see. She could not have weighed more than fifty pounds. Now she has doubled in weight —has a brown, ruddy complexion, a robust figure, and stands erect as a May-pole. The poor child has altogether lost that graceful stoop which I used to admire.

Miss M.—But are not all these facts an evidence that she has improved in health?

Mrs. F.—Health, indeed! Who wants to see a coarse, exuberant state of health in an heiress and a belle? It may do very well in a washerwoman; but, let me tell you, it is very uninteresting in Ruth Penway.

Miss M.—I differ from you so entirely that it seems absurd for me to argue against your opinion.

Mrs. F.—Did you say my opinion was absurd, miss? Did you dare to say that?

Miss M.—I said no such thing. All that you have told me of Ruth's health gratifies me extremely. My training has been directed to produce the very result which you seem to disapprove.

Mrs. F.—Your training has made her a romp —a great, strong, masculine girl, as brown as one of those German women who spend their summers in picking berries.

Miss M.—What has she done to offend your sense of propriety?

Mrs. F.—Wasn't she seen last Wednesday morning, when the thermometer was at zero, actually shoveling snow from the sidewalk before your house?

Miss M.—I saw it, madam, and delighted I was to see it. When I thought of the poor, puny little thing, who came to me three winters ago, weak and shivering,—and when I looked upon the active, graceful girl, her cheeks glowing with health, her limbs warm with exercise, braving the cold and the sleet, tears of pleasure sprang to my eyes, and I felt proud of my work.

Mrs. F.—What will you say, miss, to her being seen on Hacmetac Pond, with skates on her feet, moving at most unbecoming speed over the ice, and carrying a stick bent at the end in her hand?

Miss M.—I gave her the skates and the stick, and taught her the use of them.

Mrs. F.—And you sit there and confess it!

What would my venerable instructress, Miss Sophonisba Primwood, have said to see one of her pupils skating like a boy? She would have fainted on the spot!

Miss M.—Did she think that the boys ought to have a monopoly of the healthful out-of-door exercises?

Mrs. F.—She knew what belonged to a lady. She never would let us walk out except in single file, with a monitress at the head. Ah! she had studied the proprieties. I am indebted to her for all my knowledge of deportment. The doctor of the village called her a model schoolmistress. She used to put more business into his hands than all the families in the place. There was hardly a day that he was not called in to attend some one of the young ladies. Such recommendations of her seminary as he used to give!

Miss M.—Though I cannot boast, madam, of the number of my doctor's visits, I can boast of those of my market-man.

Mrs. F.—I can only pity, miss, your want of refinement. I shall by and by expect to see your young ladies driving hoop, or playing at puss-in-the-corner.

Miss M.—As soon as the weather is propitious, your expectation will be fulfilled.

Mrs. F.—Shall we see football?

Miss M.—The feminine dress forbids. Besides, we have more agreeable sports. If you will come next spring, you shall see how well Ruth can use the rake and hoe. You shall also see her scull a boat across the pond after lilies.

Mrs. F.—Abominable! And you encourage such things! What if she should fall overboard?

Miss M.—She would not care much; for Ruth is a capital swimmer.

Mrs. F.—A swimmer? My niece a swimmer? Your treatment of her is atrocious! *(Rising.)* What next, miss? Perhaps pugilism and the broadsword exercise!

Miss M, (rising.)—Well, to be candid, Ruth is anxious to take lessons in fencing, and I do not know but I shall let her learn the principles of the art.

Mrs. F.—Worse and worse! If I do not hear of her taking part in a prize-fight, I shall be glad. I shall write to her father at once, denouncing your whole system.

Miss M.—You have been anticipated. He has known it these two years.

Mrs. F.—Well, if he is fool enough to submit to it, I will go among my fashionable acquaintances, and expose the whole thing.

Miss M.—You will oblige me by so doing. It will save me some money in advertising.

Mrs. F.—Provoking woman!

Miss M.—Permit me to say, madam, that you are behind the age. Ill health is getting to be unfashionable. Dyspepsia is no passport to the best society. A cough is no certificate of what you would call gentility. Sensible people are beginning to realize the importance of abundant air and exercise, not only to boys and men, but to girls and women. To be "interesting," a young lady need no longer cultivate a pallid face, or protest that she is "ready to die with fatigue" after a walk of a mile. The example of the high-bred women of England, who walk their eight or ten miles a day, is influencing us more and more. So, if you would be in the fashion, you must give up your antiquated notions on the subject of feminine exercise.

Mrs. F.—You are an essentially vulgar person, miss, and I shall not bestow my superior cultivation upon you any longer. You will soon find what it is to have my disapproval. [*Exit.*

Miss M.—Poor Mrs. Fluster! Her disapproval has no terrors. Her recommendation is what I dread. [*Exit.*

—*Sargent's School Monthly.*

LADIES' DEPARTMENT.

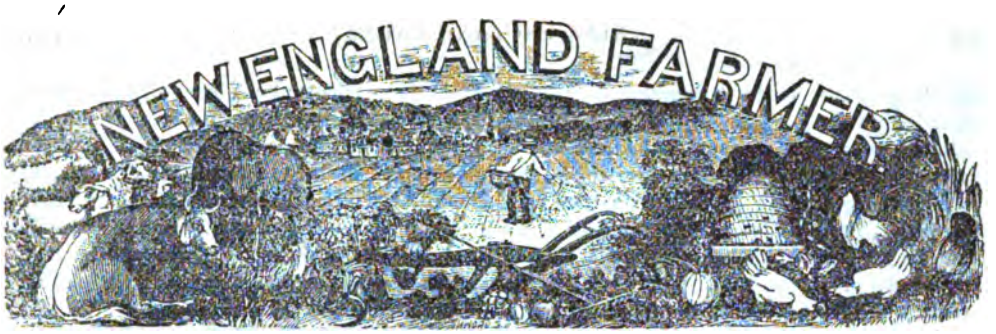
WORTH CONSIDERING.—The following paragraph from the pithy sayings of Ralph W. Emerson, contains food for reflection for a good many ladies and fast men—and not for "fast" men only, but for old "fogies" as well. We give it for the benefit of all whom it may concern:

"We spend our income for paint and paper, for a hundred trifles, I know not what, and not for the things of man. It is for cake that we run in debt; 'tis not the intellect, not the heart, not beauty, not worship, that costs so much. We dare not trust our wit for making our house pleasant to our friend, and so we buy ice-creams. He is accustomed to carpets, and we have not sufficient character to put floor cloths out of his mind whilst he stays in the house, and so we pile the floor with carpets. Let a house rather be a temple for the furies of Lacedemon, formidable to all, which none but a Spartan may enter or so much as behold. As soon as there is society, comfits and cushions will be left for slaves.

INDIAN BREAD.—A lady contributor to the *Prairie Farmer* closes an article on various subjects with the following directions for cooking Indian bread:—

"Do you know how to make good, old-fashioned Indian bread? Yes! Well, do you know how to cook it? I will give you my plan. When sufficiently light, place it in a hot oven; put into your tin or copper boiler a pail full of clean water; place it over the fire; have made a wooden frame, fitting snugly into the boiler, on which to place your bread-pans. This must be high enough to prevent the water boiling into the pans. When your bread has baked three-fourths of an hour, place it in the boiler, cover tight and steam three hours. The water must not stop boiling until the bread is done. You will have a nice loaf without the hard crust formed by baking until done."

SIMPLE CURE FOR DYSENTERY.—An old friend handed us the following simple receipt, for publication. It has been practiced in his family for many years, with uniform success, even in the most alarming stages of the complaint: Take Indian corn, roasted and ground in the manner of coffee, (or coarse meal browned,) and boil in a sufficient quantity of water to produce a strong liquid like coffee, and drink a teacup full, warm, two or three times a day. One day's practice, it is said, will ordinarily effect a cure.—*Middletown Republican.*



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, SEPTEMBER, 1858. NO. 9.

JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR SEPTEMBER.

"Crowned with the sickle and the wheaten sheaf,
While Autumn, nodding o'er the yellow plain,
Comes jovial on."

SEPTEMBER is the season in which the husbandman gathers the harvest, and rejoices over the fruit of his labor. The grass, the small grains and the early fruits have been secured, and the barns are filled almost to bursting.

This month the later crops, the golden corn, the potatoes, the roots, the squashes and pumpkins, and the fruits, are to be harvested. The corn crop is rather late, owing to the wet and cool weather of the latter part of July and the early part of August. But it is well grown, and a few weeks of dry, warm weather, will change its rich, milky juice into starch, gluten and oil, and give its hardened grains the color of living gold. What a wonderful chemist is nature! She finds everywhere the elements she needs. In every leaf, and seed and fruit, she is at work selecting, combining and compounding, that she may provide food for her vegetable and animal offspring. A faithful, kind and assiduous nurse, she spares no pains, and refuses no labor,—that she may supply all their wants. And she is not satisfied with barely supplying their wants, but like an indulgent mother, she caters for their various appetites, and furnishes an infinite variety to suit the tastes of all; and while she gratifies the taste, she delights to please the sight and the smell, and to awaken the love of the beautiful, by clothing her gifts in forms of beauty, and in the richest hues. While, then, we luxuriate upon the bounties of nature, let us learn the lessons she would teach us, and while our senses are gratified, may our hearts be growing better.

The farmers in Vermont and New Hampshire find it the safer way to cut up their corn as soon as the kernel is well glazed, and shock it in the field. This secures it from the frost. Perhaps there is a slight loss in the weight of the grain, which we might avoid were we sure of good weather to ripen it. But the stover is better dried off in this way, and the additional security against frost amply compensates for the slight shrinkage of the kernel. This practice, we think, is gaining favor. Those that have adopted it say it is no more work to husk the corn and secure the stover than when the stalks are cut and made into bundles before the corn is fully ripe. We think there are many fields that it will be safest to treat in this way, this fall.

The sun is now returning from his annual visit to the north, and on the twentieth of this month, he will have reached the equator, the point from which he started on the 20th of last March, just six months ago. At that time, the days and nights will be of equal length. From then, till the 20th of December, the days will be growing shorter, and we shall enjoy less and less of the cheering rays of the sun. During the long nights of the northern latitudes, the earth loses more heat than it receives in the short days, consequently the cold at length becomes so intense, and the surface of the land and the water becomes so deeply frozen, that the oblique rays of the sun are scarcely felt during the short period of his shining. If the inhabitants in these latitudes enjoy the advantage of the long days and continual sunlight in the summer, they suffer the inconvenience of short days, and the absence of sunlight in the winter. These advantages and disadvantages, the bitter and the sweet, the evil

and the good, are made to counterbalance each other in this life.

In this section of our country the fruit crop is not very abundant. The apples, we think, will be of better quality, in general, than they were last year. The early blossom promised an abundant crop. The deficiency is owing chiefly to the ravages of the curculio. This insect is the enemy which we have most to dread. The borer, the caterpillar, and the canker-worm, we can encounter with some hope of a successful result, but the curculio seems to be beyond our reach. It is but recently that it has attacked the apple, but its ravages are now widely extended, and what may be the result time only can show. We do not yet fully understand its habits. The canker-worm extends its devastations for a few years, and then partially, or wholly, disappears. Whether this may be the case with the curculio, future observation will ascertain. If its return shall be constant and permanent like that of the caterpillar, the prospect of profit from the thousands of trees that have been planted within the few years past will be greatly diminished. But we will not despair. If the crop is not abundant, those we have will bear a better price, and we will harvest them with the greater care.

SEPTEMBER is a busy month. The winter grain is now to be got in, and the earlier, the better. Those who neglected to seed down their grass lands in August, should do it as early this month as possible, that it may get well rooted before the ground freezes. Ditches should be dug or cleared out and a good stock of mud and peat thrown out for future use. Early potatoes should be dug this month. Rye and oats should be threshed, and not left till winter for the mice to riot in. Look well to your ruta-bagas and turnips, and thin them out where they are growing too thick. They will well repay a little care. Make your barn-cellar secure against the frost, that your roots may be properly protected, after they are harvested; your stock will be grateful for them during the cold and dreary season which is approaching.

We have often expressed our opinion of the value of the turnip crop. We wish we could speak our own view upon this subject in such words as would carry conviction to the minds of all our brother farmers. There is no crop, unless it be the mangel wurtzel, so easily raised, and probably no crop of equal value can be raised on the same ground, at the same expense. The value of turnips for fattening cattle, for making milk, or for promoting the health and thrift of all kinds of stock, is not duly appreciated by New England farmers. They have much to learn by experience upon this subject, and the sooner they set about it, the sooner will they be convinced of its importance. Many of our farmers depend largely upon swale or meadow hay for wintering their stock. Could they add to this a few hundred bushels of turnips, they would be able to carry their stock through in much better condition than they now do, and they would come out in the spring vigorous and healthy, and not lose two or three months in the summer recuperating from the loss of the winter. In sheep culture the value of the turnip can hardly be estimated. As food for colts and horses the ruta baga is very important. Put a half bushel of roots into a box two feet square and chop them with a sharp spade, and sprinkle a little meal or shorts over them, and they will soon learn to eat them freely. Try them once and you will be satisfied. Experience is the most convincing argument.

The present season has taught us in a forcible manner our dependence upon Providence. Much hay and some grain have been injured in the making. The excessive rain and low temperature have retarded many of the crops; we have barely escaped a frost, more than once, when it would have been very destructive. The ripening of the corn is still somewhat precarious, but the season has thus far been remarkably healthy, and we have an abundant supply for all our wants.

Let us then never indulge a spirit of repining or distrust, but enjoy with thankful hearts the blessings which Heaven bestows.

For the New England Farmer.

WHITE WEED—SOW GRASS SEED.

This infectious weed (white daisy it is called in some sections) has become a standard nuisance on nearly every farm in New England. Many beautiful fields are as white with it as if blanched with the snows of mid-winter. It was so much my abomination, and my father's before me, that every peering blossom was hunted out of the grass-field, and its roots spaded out as clean as a surgeon would trace the roots of a cancer with his microscopic eye. Why tolerate white weed in your grass field, any more than weeds in your garden or cornfield? If suffered to abide, it becomes a selfish monopolizer. In a few years little else will grow. What is its range of value as a hay crop? How does the feeding stock thrive upon it? Will your intelligent farmers give us light? The writer may be in the dark as to its nutritious qualities.

If it is the pest I judge it to be, this is the time to put in the Double Eagle Plow and give it a berth as near "Symmes' Hole" as possible. If it can make its way to the opposite hemisphere, I would say good riddance, and many a farmer would say amen.

Now upon this virgin furrow, harrow in your grass seed and your crop will be doubled the next year with pure hay, and not white weed, which cannot be called hay. No loss of time or of a crop.

The Michigan or Double Eagle Plow, with its skim sward mould-board and the large mould-board, buries it so deep, leaving the furrow pulverized even, and in fit condition to plant corn—is far ahead of the other good plows that turn a solid slice furrow. Your readers will have observed how quick twitch grass will start up between the furrows of the common plow, (yet I should use it to bury white weed if the other could not be obtained,) but with the Double Eagle, as I have seen it work, I can scarcely conceive that even twitch grass could find its way out, it is so thoroughly rolled over and packed deep in the bottom of the furrow by the large mould-board.

Plowing, Mr. Editor, is a most significant word, and is not strictly confined to the farmer, nor to this first best implement of husbandry. Politicians plow—the clergy plow—government plows—(comment is unnecessary,) but the farmer knows the genuine plow, and its legitimate, proper uses. All mankind should know it better. It opens the way to seed time, and has prepared us with refreshing harvest.

I would say, plow deep on all soils. You may not agree with me, but the roots of vegetable life are always sinking and seeking for nourishment and will surely find it. The deep-buried mould in shallow lands would be more retentive of moisture, less liable to be driven by fierce winds, less acted upon by the scorching sun, and by continuous plowing becomes a well incorporated depth of soil.

When a boy, my father cautioned me "not to plow up the yellow dirt." I am now convinced the "yellow dirt" should come *up* and the soil go *down* with the manure. Evaporation is rapid on such soil, and vegetable contact would make increased growth and a more abundant harvest. The farmer can easily test the principle. A little more team will be required to plow eight to ten inches deep than five to six inches. Surely, there can be no danger in making the experiment. Now is the time to sow grass seed.

Brooklyn, Aug., 1858. H. POOR.

HOW DRIVING AFFECTS THE MEAT OF NEAT CATTLE.

There is some excuse for the Western grazier's preference for the Durhams, as they drove them over the mountains. The fat of all cattle is the first to run off, the fine particles mixed through the flesh of the first—the kidney being coated over and more solid, holding out longer, and the red meat being the last to fall. One accustomed to driving, fattening and slaughtering, could detect a drove of "drifted" cattle from those taken fresh from the pastures, by seeing them pass on yonder road, as well as the skilful butcher could by handling them, and although the "drift" cattle might have much more kidney tallow, the meat would be as poor as wood; and, instead of being red, would be as blue as a whet-stone; whilst those taken fresh from the pasture or stall, if not so fat, would make more juicy, tender and sweeter beef. If you see a lot of cattle in the field or elsewhere, with good shoulders, or rather what a butcher would term showing his shoulder to the ear, without any flank, rest assured that they have been "drifted," or in some way injudiciously handled for slaughtering; for if there is no flank, there is not much fat. A poor bullock does not wear a good shoulder longer than to get rid of his fat, and the tenderest parts of his flesh, and the neck and round would be the only parts of such a bullock left for a steak.—*Major Dickinson's Pen-Yan Address.*

THE FALLACY OF PREMATURE EDUCATION.

When we are considering the health of children it is imperative not to omit the importance of *keeping their brains fallow, as it were, for several of the first years of their existence.* The mischief perpetrated by a contrary course, in the shape of *bad health, peevish temper* and *developed vanity*, is incalculable. Some infant prodigy, which is a standard of mischief throughout its neighborhood, misleads them. But parents may be assured that this early work is not by any means all gain, even in the way of work. I suspect it is a loss; and that children who begin their education late, as it would be called, will rapidly overtake those who have been in harness long before them.

And what advantage can it be that a child knows more at six years old than its compeers, especially if this is to be gained by a sacrifice of health, which may never be regained? There may be some excuse for this early book-work in the case of those children who are to live by manual labor. It is worth while, perhaps, to run the risk of some physical injury to them, having only their early years in which we can teach them book-knowledge. The chance of mischief, too, will be less, being more likely to be counteracted by their after life. But for a child who is to be at book-work for the first twenty-one years of its life, what folly it is to exhaust in the least its mental energy, which, after all, is its surest implement.

A similar course of argument applies to taking children early to church, and to over-developing their minds in any way. There is no knowing, moreover, the disgust and weariness that may grow up in the minds of young persons from their attention being prematurely claimed.

CORRECT SPEAKING.—We advise all young people to acquire in early life the habit of using good language, both in speaking and writing, and to abandon as early as possibly any use of slang words and phrases. The longer they live, the more difficult the acquisition of good language will be; and if the golden age of youth, the proper season for the acquisition of language, be passed in its abuse, the unfortunate victim of neglected education is, very probably, doomed to talk slang for life. Money is not necessary to procure this education. Every man has it in his power. He has merely to use the language which he reads, instead of the slang which he hears; to form his taste from the best speakers and poets of the country; to treasure up choice phrases in his memory, and habituate himself to their use—avoiding, at the same time, that pedantic precision and bombast which show rather the weakness of a vain ambition than the polish of an educated mind.—*Star.*

USEFUL KNOWLEDGE RESPECTING THE VEGETABLE FOOD OF MAN.

During the early part of the winter of 1857, the Rev. H. Wood, of Lowell, Mass., addressed the distinguished Dr. S. L. Dana, requesting information relating to the cheapest and best kinds of food. The answer of Dr. Dana has been published in the *Medical World;* it is scientific—as might be expected, coming from such high chemical and physiological authority; and it also contains much useful information, little known to the community in general. We will endeavor to present the substance of its most important points, because we believe such knowledge should be circulated through every corner of the world, concerning, as it does, the welfare of every human being.

It has been laid down as a law of physiological chemistry that all food serves two distinct purposes; one part, for building the body, forms the blood out of which come all the animal tissues; the other part forms fat, and furnishes the fuel by which the animal heat is kept up through the process of breathing. Food contains flesh, blood, and tissue formers in proportion to their amount of nitrogen. When chemistry, therefore, determines the amount of nitrogen in any kind of food, it expresses the relative value of that food for these purposes. The starch, gum, fat, sugar, and water, and occasionally a portion of woody fiber of grain, rarely minister to the wants of nutrition. These substances are the fuel formers, out of which fat may be formed, which is as essential as blood. Ten parts of fat are equal to twenty-four parts of starch, grape, and milk sugar in heating power.

Life cannot long be maintained by any food that fulfils only one part of the process of nutrition. A man fed only on that food which forms blood and tissue soon dies of starvation, and so does the man that is only fed on fuel-forming food; and if a man is deprived of certain salts, such as common salt, compounds of sulphur, phosphorus, potash, soda, lime, magnesia, and iron, he cannot long survive. And even if fed on all these three classes of substances, he will die of starvation, unless allowed a certain proportion of ready formed fat, in addition to the fat that may be formed out of the other elements of his food.

Nature has taught us the type of our food, viz., milk. It contains the essentials of four great groups of substances on which nutrition in its widest sense depends. The elements of milk are 1st. *Curd*, which is a blood former; it contains all the nitrogen and all the sulphur. 2d, *Butter*, which is fat. 3d, *Sugar*, which is a fuel former or heater. 4th, *Salts*—soluble and insoluble—the earth of bones, potash, soda, and phosporic acid.

Such are the substances which Nature has prepared for our first food—a mixture of four groups of substances. To suit human wants, according to its age, we should imitate this best natural mixture of these substances designed as the food of man.

In vegetable and animal food there are substances representing those contained in milk. Dr. Dana merely alludes to those of fish and flesh, and states (which is something new to most persons) that the flesh of fish contains the same amount of nutrient matter, as the flesh of oxen. Albumen forms gristle, sinews, membrane, muscle, nails, and is found in the nerve tubes. Fat is a lubricant, assists to form cells, and it forms part and parcel of all the chemical changes which the body undergoes, and is required for more purposes than merely heating the body. Sugar never forms part of the animal tissues, but it performs an important office in the changes of all these tissues. It forms lactic acid, and contributes largely to the formation of fat.

The waste of anything essential to life, and all its healthy functions must be supplied by a like substance. Food, therefore, is nutritious just in proportion as it contains the elements, properly mixed, which go to sustain the body and supply its waste. What is the best and cheapest food for this purpose? This is a great question, and one respecting which much *reliable* information has been wanting.

Wheat, Indian corn, rye, rice, and buckwheat, are the principal grains used in our country for food. Wheat holds the highest place in the market, and its finest flour—that which is deprived of most bran—is the dearest and the most admired. This cherished flour—the costliest—is actually the least valuable for food. The fat and salts of wheat reside chiefly in the bran, and the flour deprived of those, does not contain well-mixed nutrient matter.

Dr. Dana places Indian corn and rye above wheat for our food, and he surprises us by giving oatmeal the highest place of all—it contains the greatest amount of albumen, its starch is equal to that of fine wheat flour, and its fat exceeds that of any other cereal grain. Buckwheat and rice are poor articles of food; one pound of beans is equal to three and a half of rice or potatoes. Cabbage contains a great amount of albumen, but no fat, sugar or salts, but it is excellent for mixing with other substances, such as potatoes, which contain these. Oatmeal cake, bean and pea soup, baked beans, Indian meal pudding sweetened with molasses, are the vegetable food which he esteems to be the best and cheapest for common and general use.—*Scientific American.*

TOMATOES—SUPPORTING AND SHORTENING IN.

Few gardens are now found unsupplied with tomatoes, but very few persons take pains to cultivate them. The vines are usually left to straggle *ad libitum*. This is both bad economy and bad taste. If tomatoes are planted in rows, a convenient plan is to put up stakes on both sides of each row, and nail on horizontal strips or slats to keep the vines perpendicular. They may be carried up to the height of three to five feet. By this means the vines will show much better, especially when covered with ripened fruit clustering thickly upon the sides. The fruit itself will be much superior to that matured on the ground and in the shade. Strong twine or wires may be substituted for the horizontal slats. A cheaper process of supporting tomatoes is to bush them, in the same manner that beans or peas are treated. Our own tomatoes are planted around the border of the garden, and trained upon the fence, the vines being upheld by strips of leather, dou-

bled around the stalks and fastened to the fence with small nails.

Tomatoes are also benefited by *shortening in.* Three-fourths of the mature fruit is produced upon a small part of the vine nearest to the root, say one-third or one-fourth of its length. It is recommended to stop the further development of vines after a fair supply of fruit is set, by clipping off the vines growing beyond. The clipping should not be carried too far, as a supply of foliage is required to gather food from the air. One of the most successful cultivators in our acquaintance made it a rule to let no vine extend beyond four feet from its root.—*Am. Agriculturist.*

For the New England Farmer.

BAXTER ON EXCESS OF FOOD, OR GLUTTONY.

"Living like a beast," says Richard Baxter, "will at last make men judge like beasts; and will brutify their brains as well as their bellies."

And hence it is, as he very fairly infers, that to say, "I feel it do me no harm, and therefore it is no excess, is the saying of an idiot. Or it is like him who would go into a pest-house and say I feel it do me no harm. But within a few days or weeks he will feel it. It is as if the beginning of a consumption were no hurt to people because they feel it not." "Most people," he adds, "have no considerable knowledge what measure (*quantity*) is best for them; but the common rule that they judge by is their appetite. They think they have eaten enough when they have eaten as long as they listed, and not before. If they could eat more, with an appetite, and not get sick after it, they would never think they had been guilty of gluttony, or of excess."

He next proceeds to lay down some general directions for our conduct in this matter, which are so striking that I copy them, with merely a few passing comments in parentheses.

"First, therefore, you must know that appetite is not to be your rule or measure, either for quantity, quality, or time. For it is irrational; and reason is your ruling faculty, if you are men. Indeed it (appetite) dependeth much on the temperature of the body and the humors and diseases of it; and not merely on the natural need of food. A man in a dropsy is most thirsty that hath least cause to drink; though frequently, in a putrid or malignant fever, a draught of cold drink would probably be death, yet the appetite desireth it, nevertheless. Stomachs that have acrid humors have commonly a strong (*active*, rather) appetite, be the digestion never so weak; and most of them could eat with an appetite about twice as much as they ought to eat. And, on the contrary, some others desire not so much as is necessary to their sustenance, and must be urged to eat against their appetite.

"But, again, most healthful people in the world have an appetite to much more than nature can well digest; and would kill themselves if they pleased their appetites (*i. e.*, made it there business to please their appetite.) For God never gave man his appetite to be the measure of his eating or drinking, but to make that grateful to him, which reason biddeth him take. Man's appetite, you know, is not now so sound and regular as it was before the fall; but is grown more rebellious and uneasy and diseased, as the body is; and therefore it is now much more unfit to be our measure than it then was. You see it even in swine, (?) and many greedy children, that would presently kill themselves if they had not the reason of others to rule them.

"Finally, poison itself may be as delightful to the appetite as food, and dangerous meats as those that are most wholesome. So that it is most certain that appetite is not to be the *measure* (as appetite regards *quantity* of a man.) Yet this is true withal, than when reason hath nothing against it, then an appetite showeth what Nature taketh to be most agreeable to itself, and Reason, therefore, if it have nothing against it, hath something for it."

Nowhere, in the whole compass of my reading, have I met with sounder views—more in accordance, I mean, with the laws of man's constitution, as interpreted by science and experience—than those of Mr. Baxter. His position that "living like beasts makes us judge like beasts," is not more striking than it is tenable; and perhaps his broad statement that "God never gave man his appetite to be the measure of his eating or drinking, but to make that grateful to him which Reason biddeth him to take," may have much more of truth in it, than we are wont to suppose.

In any event, nothing can be clearer to my own mind though nothing should be more paradoxical to others, than that we are to be guided by our appetites as regards "quantity, quality or time." This doctrine of Mr. Baxter is certainly sound and defensible. And there is a plain reason for this. While the animals below man are left to the direction of mere instinct, this in man subserves his purpose no longer than till his reason is developed and has an opportunity to become its substitute. As reason takes possession, instinct dies out. In the fully developed adult, instinct is powerless.

As adults, therefore, as creatures of reason and not of instincts we are to ask our heads and not our stomachs or any of our inferior organs what we should do. These latter have neither eyes nor ears; but the former has both. Besides its elevated position in the physical human domain is favorable to their exercise. In other words, we are never, as mature reasoning men and women, to ask, first, what is agreeable to our instinctive feeling—our perhaps perverted tastes—but simply what is right. The question, to young or old, what do you like, or do you like this or that, should seldom, if ever, be heard; and never in the first place. The first question, I repeat, is what is right. That being ascertained, the full measure of mere agreeableness, Heaven's own measure—is sure to come in its train.

Yet the great mass of mankind persist in asking as the first question in all these things—who will show us any good, or what is most agreeable. Professed disciples of Christ, in instances almost innumerable, ask their own appetites, their fallen appetites or stomachs, as Mr. Baxter calls them, what is liked or what is relished, not what God would have done. They seek to please themselves, not to please God. Is this Christianity? Is it favorable to our growth in grace, supposing us to be Christians? What! Growing in grace and in the knowledge of our Lord Jesus Christ,

when instead of doing, like Him, the will of our Father in Heaven, we do our own will three-quarters of the time? For he who makes his own natural preferences, whether right or wrong, the measure or rule of his conduct with regard to the gratification of his appetites will not stop here. He will be led gradually, perhaps insensibly, to ask his own perverted preferences about every thing else, in the ordinary routine of daily life; our dress, our society, our conversation, our manners and habits. And what is that Christianity worth which only leads us to regard the will or pleasure of God on occasions, whose aggregate scarcely makes up one-fourth of our existence? Are we under no sort of obligation to give heed to the injunction, "Whether, therefore, ye eat or drink, or whatsoever ye do, do all to the glory of God?"

Mr. Addison, who was by no means too fully consecrated to the work of pleasing God, says in relation to the gratification of our appetites and passions and tastes, "Fix upon what is best for you and custom will soon make it agreeable." Here philosophy and Christianity meet hand in hand. They point to one and the same. They do not teach us to ask what we like or what perverted appetites or passions or tastes or relishes in others would lead them to like; but, rather, what God likes—what he would have us do, or in other words, what is right. For the pleasure, having done what is right, we may fully trust.

For the New England Farmer.

AN EASY WAY TO RAISE STRAWBERRIES.

Any one can raise a few boxes of strawberries, which will add to their pleasure and comfort. In the early part of August, prepare a bed as you would to sow beets, three feet wide, and as long as you please. Spade it up thoroughly at least a foot and a half deep, and better if two feet in depth. Set as you would cabbages, Brighton Pine, Jenny Lind, or early Virginia plants, two rows, twelve or fifteen inches apart each way. If you can easily get saw-dust, or old tan, or spent tan from the tan-yard, cover the whole surface of your bed with it two inches deep, at the same time that you set out your plants, placing it carefelly around and close to the plant, but not burying its leaves. If you cannot get saw-dust or tan, lay on a thick coating of salt hay, or rowen, but beware of any covering which has either seeds or roots in it. Water the plants well, with soap-suds, or water, during the dry weather of August and September; pinch off the runners when they begin to run. Protect them from the winter by a loose coating of coarse straw, which allow to remain till April. If the spring is dry, water them occasionally, and pull up all weeds and grass that make their appearance before the strawberries blossom, but do not dig, or fork up the soil, nor disturb the roots of your plants; drench them thoroughly with water two or three times after the berries have set. The first summer you will have strawberries enough to repay you for your labor; the second, third, and fourth summers you will have an abundant crop, and with scarcely any labor except weeding and thinning the plants a little in autumn, and weeding a little in spring.

Strawberries, I speak of garden culture, do not need high manuring, but they do require a deep soil, undisturbed roots and moisture. A strawberry root will run into the earth about as far as it finds a loose soil. I have known good crops from beds treated as above, five years in succession. The above is of no use to those skilled in the culture, but may be useful to many who have small bits of land, and would like a few strawberries of their own, if they knew it is as easy to raise a bushel of strawberries, as a bushel of potatoes, and at a not much larger outlay of labor and land. The watering may be wholly omitted, not being necessary, but still highly beneficial.

Boston, July 10, 1858. M. F. DUNCKLEE.

For the New England Farmer.

THE WEST VS. NEW ENGLAND.

MR. EDITOR:—It is said that "nature has implanted within the bosom of all men a love for the land of their birth," an affection for one's country. Whether this be true or not, there is a strong desire in most men to be the owner of land. Indeed, I sometimes think a *man* cannot be a *true* man, and feel such in all his dignity, unless he is a free-holder—a land-owner; this at once elevates him in his own estimation, and more or less by the community. Seeing, then, that all men are possessed with this feeling, the question is, how can they satisfy this feeling? Of course, there are many ways by which it can be done. Earning it at home, or going West to do it. I propose saying a few words about going *down East*, instead of going West.

Having had a touch of the western fever, I entered into a careful estimate of the advantages offered in New England and the West. So far as *land* is concerned, it is cheap in either; but taken as a whole, as going into farming as a means of getting a living and profit, I have come to the conclusion that the advantages are altogether in favor of New England. To make a long calculation short, I estimate the pros and cons something in this way. I conclude to go West, and in order to get me a farm at government price, I have got to go a long distance from the larger towns and villages. Here I find land enough truly, good land, there is none better out door, and this is all. No roads, no fences, no buildings, no school-houses, no churches, no stores, in fact, "no nothing" but land. Now, then, I conclude that before my farm is worth much, all these must be within a respectable distance, and I have got to do my part towards having them, and by the time I can enjoy my farm with all these privileges, it will have cost me quite a fortune. There is no fancy here, but an actual reality, what every Western farmer knows, or is learning every day. Now take the same money which the Western farm costs, and go into any of our New England States, and it will buy a farm good enough for any body, and leave money enough to put at interest, to carry on your farm with as much profit, and I think with greater profits, than the Western farm can produce. And this, too, without a sacrifice of some of those things which add so much to our comfort and happiness in this life, such as old friends and associations.

I beg of our young men, before they decide to

go West, to think on these things, and in this particular "let your moderation be known unto all men." I have lately seen a short article going the rounds of the papers, about the unoccupied lands in the State of Maine. Here are lands, according to *all* accounts, of the very highest order, which can be bought cheap enough to satisfy a Jew; they are not "clear out of the world," but in good *old* New England, near a good market, and surrounded with all the advantages and blessings of an old civilized community. Now if any young or old man has the western fever, and is bound to go somewhere—I would advise him to take a strong dose of "Down East," and look at these unoccupied lands in the State of Maine.

King Oak Hill, 1858. NORFOLK.

PRODUCTIVE FARMS.

To a person not familiar with the history and statistics of English husbandry, the surprising productiveness of the lands of that country will appear incredible. Nearly nine-tenths of the cultivated lands in England and Ireland are rented to tenants who pay usually from four to five pounds sterling, about twenty-five dollars, per acre annual rent.

Where is the farmer in this country who could "live" under such a burden?

Here, a farm containing from eighty to a hundred acres, is often rented for one hundred and fifty dollars—and sometimes less—and even at this rate the tenant has a hard task! The cultivation, even where there are a large number of acres in grass, will little more than pay the rent and taxes; but in England, the result is widely different. The tenant who there pays five pounds sterling, per acre, annual rent, and finds all appliances, obtains not only the means of a comfortable subsistence, but wealth, from the prosecution of a calling which here would doom him to want and destitution, and ultimately, death, unless assisted by the town.

In 1811, Mirwin estimated the produce of one English farm of 890 acres at £8,578—or $38,000! The quantity of manure applied was 13,746 one horse cart loads in one year; and 10,250 the next!

Now admitting the rent of this farm to be but $12,00 per acre, and the cost of the manure and its application $12,00 more, and if to these sums we add, for interest or expenses, taxes, and various contingent expenses of cultivation, &c., $12,00 more, we shall find, upon striking the balance, that there will remain a profit of $10,00 per acre—amounting in the gross aggregate to the sum of $10,000 clear gain to the occupant in a single year!

In the vicinity of London, a hay farm, comprising 160 acres, was rented. The rental, in this instance, was $12,00 per acre—amounting in all to $1920 per year. A heavy expenditure was required for manure—probably as much as many a New England farmer would have been willing to give for the fee simple of the land, and yet the tenant succeeded, and has since become wealthy, and with no other income than the produce derived from this one farm.

In Ireland, a poor tenant had one acre of land, erected a cottage, purchased manure and farming tools, and the first year cleared all expenses, and had a balance of forty dollars left. And yet that Irish peasant, in addition to the expenses and outlays above enumerated, had a church tax to pay, and be at the expense of purchasing his own seed, and maintaining a family of four besides himself and wife!

In this country we cultivate *too much land*. Were we to concentrate our energies upon one-quarter of the soil, we should derive greater profit from our labor, and instead of exhausting our farms, should keep them in a condition of constant improvement. Look where we may, we find that the independent farmers—the "good livers" of the country, are, in nine cases in ten, the occupants of small farms.

VALUE OF SHEEP TO THE FARMER.

Sheep are profitable to the farmer, not only from the product of wool and mutton, but from the tendency which their keeping has to improve and enrich his land for all agricultural purposes. They do this:

1. By the consumption of food refused by other animals, in summer; turning waste vegetation to use, and giving rough and bushy pastures a smoother appearance, and in time eradicating wild plants so that good grasses and white clover may take their place. In this respect, sheep are of especial value to pastures on soils too steep or stony for the plow. In winter, the coarser parts of the hay, refused by horses and cows, are readily eaten by sheep, while other stock will generally eat most of that left by these animals.

For these reasons, among others, no grazing farm should be without a small flock of sheep—for it has been found that as many cattle and horses can be kept with as without them, and without any injury to the farm for other purposes. A small flock, we said—perhaps half a dozen to each horse and cow would be the proper proportion. A variety of circumstances would influence this point; such as the character of the pasturage, and the proportion of the same fitted and desirable for tillage.

2. Sheep enrich land by the manufacture of considerable quantities of excellent manure. A farmer of long experience in sheep husbandry, thought there was no manure so fertilizing as that of sheep, and (of which there is no doubt) that none dropped by the animal upon the land suffered so little by waste from exposure. A German agricultural writer has calculated that the droppings from one thousand sheep, during a single night, would manure an acre sufficiently for any crop. By using a portable fence, and moving the same from time to time, a farmer might manure a distant field with sheep at a less

expense than that of carting and spreading barn manure.

The value of sheep to the farmer is much enhanced by attention to their wants. Large flocks kept together are seldom profitable, while small, assorted flocks always pay well, if fed as they should be. To get good fleeces of wool, and large, healthy lambs from poor neglected sheep is impossible. It is also true, that the expense of keeping is often least with the flocks that are always kept in good condition. The eye and the thought of the owner are far more necessary than large and irregular supplies of fodder. Division of the flock and shelter, with straw and a little grain, will bring them to spring pastures in better order than if kept together with double rations of hay, one-half of which is wasted by the stronger animals, while the weak of the flock pick up but a scanty living, and oftentimes fail to get that through the whole winter.

We commend this subject to the consideration of our correspondents—it needs attention on the part of the farming public.—*Country Gentleman.*

For the New England Farmer.

CHINESE SUGAR CANE AND MOWERS.

MR. EDITOR:—What say you of the *sorgho* the present season? If my memory is right, you were of the number the last year that hoped benefit to accrue from its culture. I have inquired for it, but have not found any—or at most "none to speak of," as the bachelor said of his children. Some answer that their seed did not ripen sufficiently to vegetate; but generally the impression seems to be that it is not worth cultivating; certainly not here at the North.

I have just come in from witnessing the operations of mowers. There were four in the same field, all mowing at the same time—completely harnessed and skilfully driven—cutting and spreading the grass to the admiration of all who saw them. Beyond question, implements of this character are destined to survive and be practically useful. I look forward to the time when a mower, moved by the power of one horse, cutting a clear swarth of four feet, in grass yielding two tons to the acre, completing an acre an hour, shall be deemed as indispensable an implement on every well furnished farm in New England, as a plow or a harrow.

Our friends of the State Society did not misapprehend the importance of the value of this implement, when they offered a premium of $1000 for one of unexceptionable structure; and although the award was made somewhat precipitately, still there is reason to believe that the principle on which the Heath mower is constructed, will be found the very thing that is needed.

July 14, 1858. ESSEX.

REMARKS.—Certainly, sir, we always "hope" for the best. Our people gave the *sorgho* a pretty fair trial last year, and have generally come to the conclusion that when molasses is *one dollar a gallon*, they will do well to cultivate the *sorgho* and *raise their own sweetening!* We commend them for making the effort—don't you? It is pleasant to have all doubtful questions settled.

PULPING OR MINCING ROOTS.

At a recent meeting of the *London Central Farmers' Club*, the subject under discussion was that of the expediency of reducing roots, such as turnips, beets, parsnips, carrots, &c, to a pulp, before feeding them out to stock. Mr. FORDHAM, a gentleman of some agricultural distinction, and whose name we frequently see in the English agricultural papers, addressed the meeting and recited many instances of cattle being fatted economically on *pulped* roots, and commended the process to general use. Several other gentlemen spoke in favor of the practice, some of them relating their own experiences in the matter.

We have excellent machines among us to cut roots quite fine, and a practical use of one of them has convinced us of their utility and economy, especially where the roots are to be fed to sheep or young cattle.

There is also a machine in use, devised by Mr. ————, of Lowell, Mass., for reducing roots to a pulp—this we have also used, but soon found that it required something more than man power to run it. The pulp sprinkled upon cut hay made a feed for which the cattle were extremely eager, and upon which they flourished remarkably well.

It is well to note these experiments by others, as well as to make them ourselves whenever opportunity and convenience will permit. The farmer is already deriving great benefits from such sources.

For the New England Farmer.

WELLS FOR KEEPING MILK.

I would like to make a simple suggestion through the columns of your paper, thinking it may be of advantage to some, as it would have been to me five years ago. It is in regard to a well for the purpose of keeping milk.

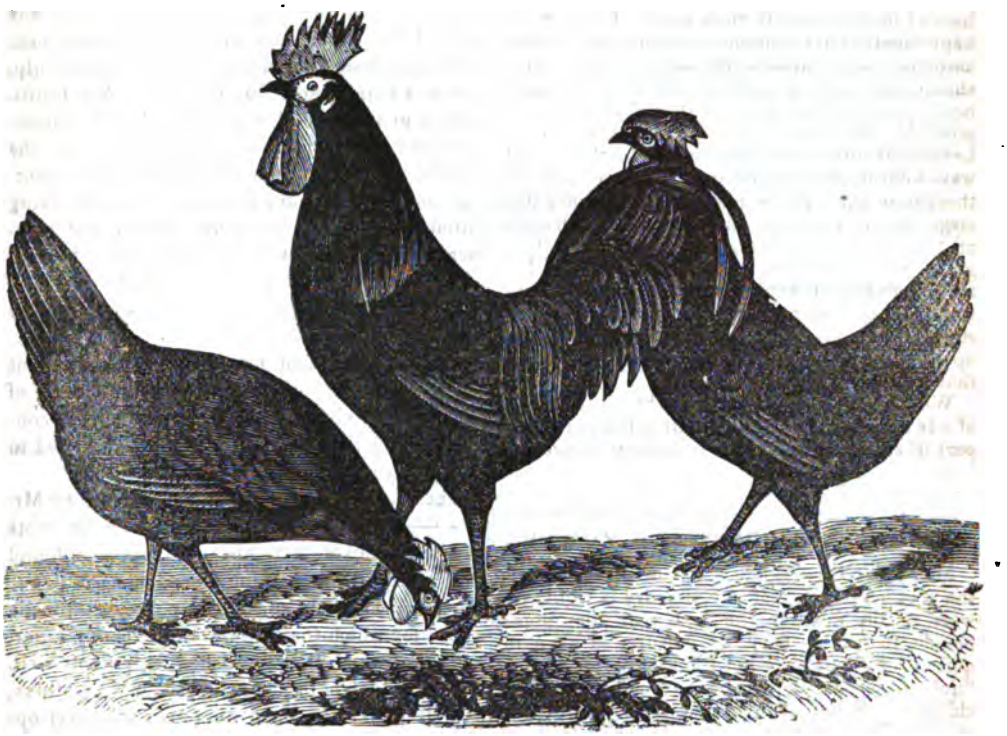
It is injurious to the water of a well, used for any other purpose, to put cans of milk in it, and it is no small labor to pump water to cool and keep milk in tubs or troughs.

Last summer I dug a well for this purpose. It is near the barn, and in a convenient situation for the neighbor to take who carries milk to the railroad. It is about seven feet deep, with about three feet of water.

The soil at the top for making manure in the barn-yard, and the gravel at the bottom for mending the highways, nearly paid for digging. A few loads of stone for the walls, and a simple platform of plank, with a square of joist for the cover to rest upon, includes the expense. It is in the shade of some quince trees, and near a natural spring.

It is not every farmer who needs such a well, that has a convenient place for digging it, without going too deep for water,—but there are a number in every town in this vicinity, who might be benefited by such a well.

Lincoln. JAMES FARRAR.



BLACK SPANISH FOWLS.

Among the various breeds of fowls which have been reared in our own yard, that which is illustrated at the head of this article has not yet been one. We are, therefore, only able to give the experience and commendations of others. They are said to possess many and rare merits. Their appearance is certainly very fine.

In an English work on Domestic Poultry, by Messrs. *Dixon & Kerr*, it is said that a thoroughbred Spanish fowl should be entirely black, as far as feathers are concerned, and when in high condition, display a greenish metallic lustre. The combs of both male and female are very large, of a brilliant scarlet, and that of the hen drooping over on one side. Their most singular feature is a *white mark on each cheek*, of a fleshy substance, similar to the wattles; which is small in the hens, but large and very conspicuous in the cocks.

A full-grown cock may weigh nearly *seven* pounds, and a hen about *six*. The comb is deeply serrated, and the wattles are very long and the bird quite free from top-knot. They are not very pugnacious. The hens are not inclined to set, but are good layers; eggs large and white.

Francis Blake, Esq., of Boston, who has bred this variety since the year 1847, his communicated his opinion of the breed to Mr. Kerr, who has transferred it to a recent edition of the "Domestic Poultry." He says:—"I have seen no breed of fowls more peculiar and strikingly attractive in its appearance than this; and as regards their laying qualities, and character for the table, I decidedly prefer them to any others with which I have had experience. They are literally *everlasting layers*. Their peculiar disinclination to set is very remarkable; for, in my experience, I have been exceedingly annoyed by the constant propensity which some other breeds have manifested in this respect. For the period of more than three years, during which I have had them, the hens have not in a single instance manifested a desire to set."

Richardson, another writer on poultry, says that "as table birds they hold a place in the very first rank, their flesh being particularly white, tender and juicy, and the skin possessing a beautifully clear white hue. They are, besides, prolific, extremely easily fed; and, in short, I know of no fowl I would rather recommend to the no-

tice of the breeder." The commendations of *Dixon* are also equally decided.

We scarcely know what more can be desired in a fowl, than is conceded to the *Black Spanish* by these, and other distinguished writers whom we have not yet quoted. *Color* in fowls is a matter of taste; we do not like black fowls, or fowls with lilac-colored legs, and always mark such as the first for the spit or the gridiron.

There is one other fact in regard to the Black Spanish, and that is their value as early pullets for laying purposes in the autumn and winter after they are hatched.

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

In our long list of birds, there is not one so beautiful and diminutive, as the Ruby-throated humming bird, its metallic lustre of plumage rendering it a perfect jewel of ornithology. There have been, as yet, but five species of humming birds discovered in the United States; these are, the Ruby-throated humming bird, *(Trochitus colubris)* every where common in the Atlantic States; the Mango humming bird (*T. Mango.*) occasionally found in Florida; the Anna humming bird (*T. Anna,*) found in California; the Rufus throated humming bird, (*T. Rufus;*) and the Purple-throated humming bird (*T. Alexandri,*) first detected by Dr. Heerman at Sacramento City. Of the three hundred and twenty-five species of humming birds now known, but one, the Ruby-throated, is found in New England. Mr. Cassin, in his "Birds of America," says, in size the humming birds vary much. The Giant humming bird of Brazil, which is the largest, though one of the plainest, is about the size of the Chimney bird of the United States, and several fine species of the later discoveries in this group are but little smaller. Several species are quite as large as the house wren. On the other hand, there are humming birds little larger than the humble bee of our meadows; and there are many species of beetles and other coleopterous insects, that are much larger. The common ruby-throated humming bird of the United States, is a medium species, and of respectable dimensions, when compared with some of his pigmy brethren of the far South. Mr. William H. Edwards, in a "Voyage up the Amazon," thus describes the little Hermit humming bird: "Wherever a creeping vine opens its fragrant clusters, or wherever a tree flower blooms, may these little birds be seen. In the garden or in the woods, over the water, everywhere, they are darting about; of all sizes, from one that might easily be mistaken for a different variety of bird, to the tiny Hermit *(Trochilus rupigaster,)* whose body is not half the size of the bees buzzing about the same sweets. Sometimes they are seen chasing each other in sport, with a rapidity of flight, and intricacy of path, the eye is puzzled to follow. Again circling round and round, they rise high in mid-air, then dart off like light to some distant attraction. Perched upon a little limb, they smooth their plumes, and seem to delight in their dazzling hues; then starting off leisurely, they skim along, stopping capriciously to kiss the coquetting flowerets. Often two meet in mid-air and fight furiously, their crests and the feathers on their throats, all erected and blazing, and altogether pictures of the most violent rage. Several times we saw them battling with large black bees, who frequent the same flowers, and may be supposed to interfere often provokingly. Like lightning, our little heroes would come down, but the coat of shining mail would ward off their furious strokes. Again and again would they renew the attack, until their anger had expended itself by its own fury, or until the apathetic bee, once roused, had put forth powers that drove the invader from the field."

From this description of the habits of the humming bird, from the banks of the Amazon, we perceive it differs but little from our ruby-throated gem, which is made by some ornithologists the type of a genus. The humming bird is distinguished for its rapid flight, and has what is called a falcated, or sword-shaped form of wing that is possessed by no other bird. It is this form of pinion that causes the humming sound by its rapid vibrations. It is large for the size of the bird, and of great power, and when in motion the whole body is completely under its control. As the tiny birds moves in their quick and rapid flight, darting from side to side, their bodies seem but appendages, and sway and swerve like flowing dresses in the wind. It was for a long time supposed that humming birds subsisted upon the nectar of flowers only; it is now ascertained that small dipterous insects form their principal food. The habits of the ruby-throated humming birds are so well known to the readers of the *New England Farmer* that I will not repeat what has been written by our ornithologists. Mr. Charles Waterton, the eccentric and enthusiastic ornithologist who rode the Cayman in the rivers of Demerara, takes exceptions to Mr. Audubon's account of the humming bird, where he says, that in one week from their hatching they are able to fly. Waterton remarks that "Mr. Audubon tells us, that in one week the young of the ruby-throated humming bird are ready to fly. One would suppose, by this, that they must be hatched with a good coating of feathers to begin with. Old dame nature sometimes performs odd pranks. We are informed that our crooked-back Dicky the Third was born with teeth; and Ovid mentions the astonishingly quick growth of certain men. He says, in his account of the adventures of Captain Cadmus, who built Thebes, that the captain employed some men as masons, who had just sprung up out of the earth. I have Mr. Audubon's account of the growth of the humming bird, and I have read Mr. Ovid's account of the growth of Captain Cadmus' masons, and both very attentively. I think the veracity of the one is as apparent as the veracity of the other. What, in the name of skin and feathers, I ask, has Mr. Audubon found in the economy of the ruby-throated humming bird, to enable him to inform Englishmen, that its young can fly in so short a space of time? The young of no other bird, that we are acquainted with, from the Condor to the Wren, can fly when only a week old." With all due allowance for the prejudices of Mr. Waterton against our great ornithologist, we still think

his criticisms just. We do not believe a humming bird, naked, blind, and so feeble as scarcely to be able to raise its little bill to receive food from its parents, as Mr. Audubon asserts is their condition when hatched, would be able to fly in one week! Can any reader of the *Farmer* give us any information upon the subject? Mr. Waterton, in continuing his criticisms, says, "A word on the cradle. Mr. Audubon tells us, that the little pieces of lichen, used in forming the nest of the humming bird, are glued together with the saliva of the bird. Fiddle! The saliva of all birds immediately mixes with water. A single shower of rain would undo all the saliva-glued work on the nest of Mr. Audubon's humming bird."

Now Audubon is not singular in his belief that the bird in question uses saliva in the finish of its cradle, as the same is asserted by Wilson and Nuttall. Upon the examination with a good glass, of a nest, that has undoubtedly been exposed to storms of rain, we find the coating of lichens firmly attached to it. Audubon's description of the humming bird's nest is as follows. "It is of the most delicate nature, the external parts being formed of a light grey lichen, found on the branches of trees, or on decayed fence-rails, and so neatly arranged round the whole nest, as well as to some distance from the spot where it is attached, as to seem part of the branch itself. These little pieces of lichen are glued together, with the saliva of the bird. The next coating consists of cottoney substance, and the innermost, of silky fibres obtained from various plants." Wilson's description is as follows: "The outward coat is formed of small pieces of bluish grey lichen, that vegetates on old trees and fences, thickly glued on with the saliva of the bird, giving firmness and consistency to the whole, as well as keeping out moisture. Within this are thick, matted layers of the fine wings of certain flying seeds, closely laid together; and lastly, the downy substance, from the great mullein, and from the stalks of the common fern, lines the whole." Nuttall in describing the nest of the humming bird, says, "it is concealed by an artful imitation of the mossy branch, to which it is firmly attached and incorporated. Bluish-grey lichens, agglutinated by saliva, and matched with surrounding objects, instinctively form the deceiving external coats; portions of the cunning architecture, for further security, are even tied down to the supporting station. Within are laid copious quantities of the pappus or other down of plants; the inner layer of this exquisite bed, is furnished with the short wool of the budding Platanus, the mullein, or the soft clothing of unfolding fern-stalks." A nest of our bird lying now before me, is composed mainly of the purple cottony substance, from the stalks of the fern, intermixed with a short fibrous vegetable substance, evidently with the design of holding together the short staple of the fern cotton or down. This fibrous substance seems to be thoroughly incorporated throughout the entire nest, and as seen on its outside, appears in some degree to hold and retain the lichen in its place. Portions of this outside deceptive finish are so firmly attached to the nest, as, when taken from it, to bring away some small parts of the fabric with it, while other portions found detached from the nest, remain in their position, by the fibrous substance surrounding them. So that it is at least safe to say to Mr. Waterton as at present informed, that "if the gluten don't stick," the lichen, with its rough edge and surface, is kept in its place by being imbedded into the fibrous cotton probably by the bill of the bird. It is therefore not so clear that the account given by our three most distinguished ornithologists, in the matter of hum-bird gluten, should be considered apocryphal, and be classed with the fabulous accounts of the red-throated humming bird, as related by father Chavlevoix or Fernandez Oviedo.

Danvers Port, July 19, 1858.

RAISING AND PICKING GEESE.

When the good motherly goose wishes to set, give her eleven eggs, and shut her away from other geese and ganders. Supply her with food and water—give her grass as well as corn, if the former is sufficiently grown for gathering. In four weeks the young goslings will begin to appear, and will all hatch in a day or two's time. Don't hurry them from the nest, nor be overanxious to have them eating; they will be ready for that when they become older. Feed them with a little bread and milk at first—corn meal does not seem to agree with them as well. Let them go to grass and water in pleasant days. A shallow vessel, which they can get in and out of readily, supplied frequently with clean water, is as good as any, so far as raising geese is concerned, though it is less trouble if one has the pond for them. Be sure and shut them up at night, in a warm, dry place, and keep them there until the dew is off, in cold mornings. Shut them up in cold, stormy days, also, feeding them with handfuls of fresh clover. If no accident befals them, they will live and grow, without trouble.

There is no machine for picking geese, that ever I heard of; the thumb and finger must do that work. The time to do it is when the feathers are ripe, which occurs about four times during the season. Feathers picked when green—in the pin-feather state—are not fit to put into a bed; they can not be cured so as to be as light and sweet as ripe feathers are. When picked, put the feathers in a sack made of thin cloth—an old sheet is good—and dry them perfectly in the sun. Afterward, they will keep good in any dry place.—*Genesee Farmer.*

ACCOUNTS OF THE CROPS.

During the busy period when the crops are growing, and need constant attention, most of our farmers feel obliged to remain pretty constantly at home and give them the care which they require, and they can, therefore, only learn what the prospects of the crops are in other sections than their own, through the papers of the day, or by casual reports from travellers.

We, therefore, invite our correspondents to favor each other and the general reader with such brief reports of the state of the crops, as may be found from Berkshire and Middlesex counties in this paper.

We shall be glad of reports from all the New England States, from the South and West, and the Canadas, as we have readers in them all.

By mingling brief remarks in these reports of the causes of failure or success in certain crops, we believe much valuable information may be disseminated throughout our whole circle of writers, readers and operators.

CURIOSITIES OF COMMERCE.

Turning over the pages of the *Cyclopædia of Commerce*, just published, a few matters attracted our attention as curiosities which we propose to transcribe for our readers. We were lacking for the small things in commerce, matters that, in taking a magnificent, broad and comprehensive view, would be overlooked. Just as an invention of the greatest importance for domestic purposes would be overlooked and unnoticed, in its homely attire, when placed in an exhibition and surrounded by works of polished art, costly machinery and gorgeous furniture. A humble inventor once placed in such an exhibition a few bunches of friction matches. They were unnoticed. Visitors went there looking for some great thing, not realizing that the despised package of splints, tipped with chemical fire, was the greatest thing in that proud collection, destined to work a revolution in the means of procuring artificial light, and to become a universal necessity, to be deprived of which would be one of the greatest inconveniences that could happen.

It is not more than twenty years ago since the tinder-box was in universal use. It is abolished now. The invention of the friction match spread slowly, but who, at this day, would venture to say they could do without it? Insignificant as they appear to be, single factories with extensive machinery, cut up large rafts of timbers annually for matches.

Under the head of Pin, we find that the manufacture of this indispensable little instrument was commenced in the United States between 1812 and 1820, since which time the business has extended greatly, and several patents for the manufacture of pins have been taken out. The manufacture in England and other parts of Europe is conducted upon improvements made in the United States. Notwithstanding the extent of our production, the United States imported in 1856 pins to the value of $40,255.

Still keeping our attention directed to small things, we find that the imports of needles into this country for 1856, amounted to $246,060. It is said that needles were first made in England, in the time of the bloody Mary, by a negro from Spain; but as he would not impart his secret, it was lost at his death and not recovered again till 1566, in the reign of Queen Elizabeth, when a German taught the art to the English, who have since brought it to the greatest perfection. It is stated that the construction of a needle requires about 120 operations, but they are rapidly and uninterruptedly successive.

The Temperance people will find an argument to enforce their doctrines in the fact that 41,071,636 bushels of grain, paying twenty-five million dollars duty, are annually converted into malt in Great Britain for ale and porter. It may reasonably be inferred that a great quantity of these beverages is drank there.

Ground nuts are quite an institution with Young America, eight hundred tons having been imported into the United States from Gambia in one year. We, however, dissent from the encyclopædist, when he says they are most used here at dessert, roasted, as chestnuts are elsewhere. But France is the great market for ground nuts, where they are used for oil of which they contain large quantities. The insignificant Hazel nut, so agreeable to the palate, but so difficult to get, is exported from Tarragona, to the extent of 25,000 or 30,000 bags of four to the ton. A kind of chocolate is prepared from them and they have sometimes been made into bread. The pressed oil of hazel nuts is little inferior to that of almonds.

The original inventor of the Ayrshire snuff-boxes was a cripple hardly possessing the power of locomotion. They are made of wood, admirably joined, painted and varnished, and were first manufactured only sixty years since. Instead of taking out a patent, the inventor entrusted his secret to a joiner in the village, who in a few years amassed a great fortune, while the other died as he had lived in the greatest poverty. Speaking of snuff-boxes, snuff-taking took its rise in England in 1702. Under the head of *hair* the *Cyclopædia* says that two hundred thousand pounds weight of woman's hair is annually sold in France and that the price paid for it is usually six cents an ounce. One hundred roses are required to give a yield of 188 grains ottar or oil of roses.

There are, doubtless, in this compendious work, a great many curious, interesting and instructive facts, if one had the time to search them out. And now, as we are closing, we notice quite a number of items, such as that a bale of Sea Island cotton weighs 333 pounds and measures 36 cubic feet, while a bale of East India cotton weighs 383 pounds and only measures 15 cubic feet, a fact of great importance in the question of transportation. What makes this great difference in cubic proportions?—*Boston Herald.*

For the New England Farmer.

A CHEAP FEED FOR SWINE.

Happening to call upon a lady a few days since, not a milliner shop one, but a well educated one, who knows what it is to grapple with the practical duties of life in the kitchen and the parlor equally, and who now is compelled to provide for her orphaned children,—I saw in her kitchen a new mode of providing food for a pig. She had caused a large boiler to be filled with weeds which her little boys had pulled up about the premises, for she superintends a small farm, and these were being boiled. More were added from time to time, till the whole kettle was filled with well boiled greens. These, when done, were taken out with a pie slice and well cut up. A little bran and the slops from the kitchen were added and fed to the pig. She remarked that he seemed to like the feed and to thrive on it. The boiled weeds were, she thought, worth as much as the same bulk of boiled potatoes. Of course, I wait-

ed on the pig while at dinner, and found both an appetite and rotundity that would do credit to a candidate for city aldermanship.

This was a new feed to me, and the experiment seemed successful. It can be no more work to boil the weeds than potatoes, and if they answer, any farmer has weeds enough about his premises to save not a little in raising his swine, besides benefiting his land, by boiling them up. J. H. A.

Hinsdale, N. H., 1858.

For the New England Farmer.

NEATNESS IN FARMING.

MR. EDITOR:—I wish to speak of neatness in farming. I think this has been and is too much neglected by our farmers. It is just as important to be neat in farming as in any other branch of business; it is not only economical to be neat, but it shows a cultivated taste, which all can appreciate. How essential it is that the farmer should have a place for everything and everything in that place. Instead of throwing the plow and other farming tools down in the yard, they should be carefully laid away till they are wanted for use. How important it is that every farmer should strive to make home happy and pleasant. In setting out a few trees around his premises, they not only look handsome, but they afford a cool and refreshing shade on a hot summer's day, and thus tempt the farmer's sons to remain at home, instead of leaving their rural home for the city.

In travelling through Londonderry, N. H., a few days since, I noticed the neatest farm I ever saw, (the residence of Henry Crowell, Esq.;) everything around showed a mark of neatness. The land was well tilled and the buildings were well painted. This is economy in the farmer, as much as anybody else, for if his buildings are well painted it will cost but little to keep them in repair. The pig pens should be kept clean. It costs but little to whitewash out-buildings once a year. The farmer has plenty of days when he can do this, thereby adding much to the beauty of his premises, and the general health of all concerned. The winter's wood which is prepared for the fire, should not be suffered to lay all round, but should be carefully packed away, it will then be fit and ready for use.

CHARLES H. ROGERS.

Concord, N. H., July, 1858.

REMARKS.—We say "amen" to all this. Nearly every good farmer, now-a-days, has a double duty to perform. He is not only a farmer, but he is also *a teacher*. The men and boys he employs have little or no education, while some that they have acquired is more expensive than their ignorance. We do not intend to find fault with them, but only speak of them as they are. Their opportunities have been few among a people whose practices widely vary from ours, and upon whom the idea of *system* has not yet dawned. But is it not passing strange that any person of any name or nation, should not possess some faint idea, at least, of neatness and order? A good rule on the farm is this, viz.:—If any one uses an implement or tool for any purpose for which it was not intended, and breaks it, make him pay for it. For instance, if a man pries up a stone with a shovel (as is often done) and breaks it, he has used the shovel *instead of an iron bar*, and must pay damages,—and so of every other implement, or tool.

One may lift a hundred pounds of hay with a good three-tined fork, but if it is thrown only lightly upon the scaffold or barn-floor, it will fly like glass. It *was not made to be thrown down*, and has no power of resisting such a strain. If every tool on a good-sized farm were always clean and in its place when not in use, it would be worth the interest of two or three hundred dollars annually, to most farmers.

Nothing will touch them but to *make them pay when they break tools carelessly.*

COMPOSTS—MUCK AND ASHES.

A few weeks since we put the question: "Got any ashes?" to our readers, and suggested some of the benefits following their use as a direct application to the soil. Now, if they "have any muck," we would remind them of one of the forms of compost into which it may profitably enter. We take up this variety of muck compost, first, rather than that of muck and barn manure or other material, as on the whole more seasonable at present.

Muck, we remarked, only needs further decomposition by fermentation to convert it into a valuable manure, equal, according to Dana, to cow dung. Any alkali will do this, and ashes answer well the purpose.

A writer says, "To bring out the ammonia, the muck must be fermented, which may be effected by the use of alkalies. From fifteen to twenty bushels of ashes, or ninety pounds of potash, are required to a ton of peat. Such a compost will contain about the same amount of ammonia as cow dung. * * * A farmer in Watertown sells his cattle manure, and mixes the leached ashes from his soap and candle factory with muck, one part of the former to three of the latter, and thus keeps his farm in a high state of cultivation."

As to the quantity of ashes required for composting a cord of muck, no exact rule can be given, for some specimens will possess greater acidity than others, from less perfect decomposition, the character of the vegetation of which it is composed, or other varying causes. Experiment, however, will furnish a ready test of this question. Five bushels of ashes to a cord of muck, has been found sufficient; they should first be placed in layers, and afterwards completely intermingled by shoveling over at intervals. Twelve to fifteen loads per acre, will furnish a sufficient dressing for one season, though on soils lacking in vegetable matter, it should be repeated for several years.

Many experiments have shown the value of this form of compost, and we scarce need further to urge it upon our readers. To the many in all

sections of the country, who *can have muck for the digging* on their own farms, and whose daily fires supply ashes in considerable quantity, it would seem to be a most convenient and profitable method of increasing the stock of manure, and the consequent productiveness of their soils. It is well, if the muck is of a particularly raw character, to dry it for some time before composting, allowing it to be exposed to the air and frost over winter, but with many kinds this is not essentially necessary. In conclusion we would recommend a trial of composts of this character, as a top-dressing for dry grass lands, to be applied early in the fall. Finely pulverized as it should be, it will at once go to "the root of the matter," and prove no offence, either to grazing animals or the scythe and rake in after years.—*Country Gentleman.*

For the New England Farmer.

MR. MECHI AND HIS FARM.

MR. EDITOR:—You will judge whether a few extracts, taken promiscuously from a pamphlet, by J. J. Mechi, published in 1850, will afford your readers an instructive article at the present time.

It should be remembered that Mr. Mechi was not bred a farmer. He was and is still a London manufacturer; and, inasmuch as he keeps a large store for the sale of his wares, he is what would be denominated *a merchant.* If our mother tongue, as used on the other side of the water, in the shade of a less and less overshadowing aristocracy, would prefer the term *shopman*, that is no business of ours. As a merchant, Mr. Mechi would rank with our Lawrences, Appletons, and others of a similar stamp.

In the business of manufacturing goods and selling them, the world over, Mr. Mechi, I believe, became rich enough; and he must have found enough to do, at least enough for any ordinary man, though it would seem, not enough for him. The fact is, he carries a great deal of steam; and more than one safety-valve was wanting to let off the inherent energy of the man. Under the pressure of a business that would have quite satisfied most men—kept them out of mischief at least—Mr. Mechi took to farming.

A love of *notoriety* may have prompted him. If his birth was obscure, it was not necessary that his life should be, not even in old England; and who will blame him for wishing *to be known*, as the doer of good deeds? There is no virtue in being obscure; none in doing nothing; none in doing less than one has talent to do. But Mr. Mechi's hobby was not to be a *gentleman* farmer; he would be a *practical* farmer; would not create a sort of Baronial home on his farm, but repair the old buildings, with a decent regard to economy, and build such new ones as comported with comfort, utility and good taste; and thus create such an homestead as intelligent, working farmers may aspire to, both in that country and this. His hobby, as I suppose, was to test a principle. He believed that the application of capital and science to agriculture would cheapen production; he wished the experiment to be made, as it never had been made, *thoroughly, perseveringly*, and with exact accounts; and like an energetic, self-reliant, business man, he felt that he was the very man to make it—could carry it out a little better than any one else. He could furnish the capital. If there was loss, it would be his, and nobody should complain. If there should be a development of new and valuable truths, every body might profit by them.

But Mr. Mechi's position cannot be fully understood, without considering the political complexion of things, at the time when he turned farmer. Sir Robert Peel was experiencing about that time a most extraordinary conversion—was in a transition state, passing from the extreme of protection to be an ultra free trade man—had betrayed, or was about to betray, the landed aristocracy, as they chose to charge him. Hither it was enough for the English landholder, if he pocketed a heavy rent; and it would do very well for the tenant farmer if he took things lazily and raised a little food, because he was sure to get a good price for it. But now prices must come down; there would be competition; the Yankees, the Dutch, and who and what other races and tribes, would come in, and undersell the English farmer on his own soil. Alas! alas! if the people should once get a taste of cheap bread! It was not the nobility that bewailed thus—not they alone, nor peculiarly; the nobility of England, in part, and a large part, too, are *noble* men, at heart more democratic than thousands who fawn about them, willing that the people should have cheap bread and cheap bibles and cheap newspapers; disposed to give up every thing as far as consists with what they honestly believe necessary for the maintenance of their own rights and the greatest general good. But there was fogyism among the aristocracy; there was fogyism among the commoners; there was fogyism everywhere; just as there is among us, as fearful of cheap bread, cheap books, cheap anything except labor, as some of us are of cheap postage and liberty for negroes.

The deepest sorrows at Sir Robert's conversion—betrayal of his friends as they chose to style it—were of course felt by the landlords and the tenant farmers. They were sold out; going, *going*, GONE; dying, *dead, buried;* no, not buried, but afraid they should fail to be buried decently. Fogyism is alike in all countries. In reform, it sees nothing but impending ruin. In its bleared eye, all progress is reform; and is to be hated, slandered, talked down. To *lie* it down is no *sin*. Ninety-nine-hundredths of all the lying in the civilized world is by fogies against progressive men; and no matter what the proposed reform is, whether to give bread to all the people in England, or to give liberty to all the people in America. In Sir Robert Peel's day the landholders, with some noble exceptions, wanted protection, that they might secure high rents, and the tenant farmers wanted protection, that they might be sure of high prices for produce. Their heart's motto was, The government take care of us, and the devil take the hindermost. They compounded with conscience, by the promise of poorhouse soup, in extreme cases, that is, when the devil failed to teach the starving to live by stealing.

But there were progressive men in England then. There are more now, and there will be still more ten years hence. Progress in England will be a rich treat to republican eyes, and no

mistake. The progressive men said to the landed aristocracy: "No, you are not sold, you are not dead, we are not going to bury you, we shall not get rid of you so easily." Mr. Mechi and such men as he, saw that if the farmers could get but half as much for their *corn*, they could grow twice as much. They said to the grumbling, woe-begone farmer: "Wake up from the stupidity which the over-nursing of the government has induced." They said: "Let the landlord invest capital on his land, rendering it doubly productive; and then let the farmer go to work and raise double crops; for both will do well enough still, and the British poor will cease to need the charity of cargoes of American flour."

In this state of things it was, that Mr. Mechi commenced his experiment, to see whether the productiveness of land can be doubled, by a judicious outlay of capital; and whether it is possible that the British farmer can *live* by growing bread at such a price that British laborers can *live* by eating it. A magnificent experiment! A misfortune was, that education and previous business engagements had failed to educate him a farmer. He is too impulsive to wait, after a purpose is taken. Could he not farm, and learn to farm, at the same time? That is the only way for such a man. He took it; and like the early Methodist preachers who preached and prayed and learned to preach and pray all at once; studied rhetoric and practised it, all at the same riding, with wardrobe and library in the same saddle-bags; and became in most cases eminently useful men; so it has been with him.

Mr. Mechi purchased a farm of 170 acres in Kelvedon, Essex county, some forty miles from London, near the Eastern Counties railroad, of rather poor land, some of it very sandy, but more a heavy clay. The annual rental was valued at 12*s* (about $3) the acre. He went at it—at chemistry and clay, philosophy and sand, farming in all its departments, and learning some to farm. He soon became wise enough to teach every body; but not yet has he become too wise to be taught by every body, that understands the subject. In 1850, the rental of his farm was apprized at 36*s* (about $9) an acre. He had not only doubled, in the estimation of the judges, but had trebled the productiveness of the land. Mistakes he acknowledges he made, as any one would in a new employment, and the fogies laughed, but he corrected them the while, and went ahead. But now for the extracts. The opinions they imply may not all be correct, even in relation to English farming, and much less in relation to soil, climate and circumstances so different as ours. But are they not worthy the consideration of American farmers?

CAPITAL—ITS ORIGIN.

"The physical and mental powers of a nation form its original capital. It is labor, directed by the mind, that feeds and clothes us, and procures, for our social adjustment, the metals which form the accepted standard of our currency."

ROOM FOR IMPROVEMENT.

"The more numerous and concentrated the population, the more wealthy the nation, provided means are found for its employment. Can it be denied that we have yet, in this United Kingdom, a wide and untilled field for agricultural labor and investment? Look at our statistics of moor, bog and waste. O, but I am asked, can these be profitably reclaimed?

Request the poor peasant squatter to show you his cottage garden or allotment on such soils, and conviction will at once reach you."

CAN CAPITAL BE OBTAINED?

"I am asked, 'Where is the capital to come from for all these improvements?' I reply, Where *does* the capital come from to make railways and docks; to build steam-vessels; to erect a whole town of new squares and streets, and to carry out every other useful and profitable undertaking? I believe the surplus profits of the nation are estimated at fifty millions annually. Every ten years, this accumulated wealth has found vent in rash or dangerous speculations. Fortunately, foreign loans have been superseded by British railways; and I can perceive clearly, that the surplus gains of the present times are destined to pass into agricultural improvement."

DEEP CULTIVATION AFTER DRAINAGE

"Is essential to profitable farming on heavy lands. I effect this by removing the breast from a plow, and letting it follow, drawn by a pair of horses, in the track of the first plow. We thus gain a greater depth. In summer, I use a very large plow with four horses, to open the work, and follow with another plow and four horses in the same track. This brings up immense clods and blocks of the nasty, undisturbed subsoil. When dried by the sun, the Crosskill roller, with 5 cwt. added, cracks them; the scarifier operates, and again the Croskill renews the attack, all in dry, hot weather, until you have a perfect garden—yellow-looking, it is true, but aerated, and deprived of many noxious properties, and ready for mixing with abundant manure and calcareous matter. You thus bid adieu to root weeds that have tormented you for years; you facilitate the percolation of water, air, manure and roots. Your crops do not dry up in summer, or freeze in winter."

ARE EXHAUSTING CROPS TO BE AVOIDED?

"For my own part, I like a heavy exhausting crop. It implies a heavy return, with means for restoring the deficiency occasioned by it. Miserable crops, occasioned by the save-all and cheese-paring principle, cause us to feel severely the pressure of our rent, tithes and rates. They re-act on the landlord, laborer, tenant, and community at large."

HUSBANDING OF FEED.

"Experience has taught me, and will teach others, that in order to succeed in farming, we must produce a much larger quantity of meat on our farms than at present, and at less cost. In order to do this advantageously, it becomes necessary to consume a large portion of the straw of the farm, cut into chaff, and cook it with meal or ground oil-cake. We are thus deprived of the usual cattle bedding, and must find a substitute.'

"I believe it is the great quantity of stock kept, that enables the Lothian farmer to compete at so great a distance, with the south country farmer; and I believe it is the still greater quantity of stock kept by Mr. M'Culloch, of Auchness, that enabled him to surpass the Lothian

farmers. Mr. Lawes has shown most indisputably, in his admirable papers in the Royal Agricultural Society's Journals, that we can produce manure cheaper and better by feeding stock, than even by purchasing guano. I mean not feeding on turnips alone, but using the productions of the farm in conjunction with purchased food."

"Very much depends on the season and weather. In cold weather, pigs and bullocks can scarcely be packed too close, so long as there is room for them to lie down comfortably. Sheep require a little more room, or ventilation and temperature. This is best done by a thermometer, because our own feelings are not always a sufficient criterion. Every cattle-shed should feel as comfortably warm as a drawing-room. The opening for ventilation should be at the highest point.

"Fine bred pigs, having little hair, must have a much warmer temperature than sheep. When pigs huddle together, it is a sure sign that they are not warm enough. Cold, stopping the circulation in the skin, drives the blood to the internal organs, and causes inflammation.

"I have often been struck on seeing how soon my groom will get a horse into condition, by warmth, cleanliness and food."

AGRICULTURAL SCIENCE.

"The facilities for acquiring agricultural science, are now great. We have now the opportunity of rubbing mind against mind, and eliciting bright scintillations of intelligence. The priceless volumes of the Agricultural Society of England and Scotland, to which every farmer should belong, the agricultural press and periodicals, teem with novelty and science, and bear unquestionable testimony that the agricultural community can no longer be a non-reading class. The Royal Agricultural College at Cirencester, and other similar but minor establishments, invite the juveniles of agriculture to excel their parents."

CONCLUSION.

"Can it be possible that England, great in wealth, liberty and industry, superabundant in capital and labor, and superlative in manufactures and machinery,—I say again, can it be possible or permissible that Britain, with all these advantages, with merchant princes and baronial traders sweeping the seas, with her navy and merchant fleet, shall be humbly dependent for her daily bread on strange and foreign lands? I will never believe it can continue. I will never believe that British enterprise cannot and will not compete with the ill-fed vassalage of mere corn-producing countries. Countries whose people cannot afford to eat the wheat they send us, and whose agricultural practice, tested by our own, ranks low in the scale of comparative perfection. I cannot believe that our wealthy and patriotic aristocracy will any longer permit such an anomaly to continue.

Lastly, I commend to your especial regard the noble practice and improvement of agriculture, as beneficial to health, as conducive to longevity and mental repose, and as full of independence; presenting to your mind, through the charming and ever-varying face of nature, the impress of almighty Goodness and Wisdom. I commend it, not only on the low ground of individual profit, but, in virtue of its employing and feeding the people, as a means for promoting the moral, social and political strength of this great and happy nation."

For the New England Farmer.

THE BEE HIVE.

MR. EDITOR:—Any one who has not given attention to the subject would be surprised, upon inquiry, with the fact of the large number of "Patent Bee-hives" there is before the public, all claiming to be the "best hive out," with the "moth proof" thrown in. In a general way, Norfolk has expressed his opinion pretty freely on these, without any particular reference to any. Now in regard to hives—as with every other particular thing made to accomplish a particular purpose—some will be, and in the nature of things must be, better than others. As bee culture in this State is mostly, and will probably be in future confined to a few swarms—say under ten—to the individual, a good-looking and convenient hive will be used rather than the old-fashioned box, because in very many cases, bees are kept as much for the pleasure they afford as for the profit; they will give a large share of each if properly managed.

The requisites of what any kind of hive ought to possess I have heretofore stated, and now I wish to call the attention of the readers of the *Farmer* to the Union Bee-hive, invented and patented by Mr. G. H. Clark, of East Washington, N. H., and I do this not to advertise this particular hive—by no means. My advice is, before you purchase, examine all you can conveniently find, and hold fast to that which is good. I have tested this Union hive along with Mr. Langstroth's movable comb hive, the two patents which now seem to take the lead in this region, and the Union is decidedly the best hive for all practical purposes; and if, as is stated, Mr. Langstroth has borrowed the only good thing there is about his hive from the Union, and gets cut off from its use in making his hive by the patent—his hive is good for nothing.

I do not know as you allow one to express his opinion so freely as I have—nevertheless I think truth is on my side. I have no interest whatever in any hive that has patent attached to it; but if any one feels interested enough to call at my place, I will shew him the difference between some half dozen patent hives, and how the *bees* themselves work in the Union. NORFOLK.

King Oak Hill, April, 1858.

THE COW-FISH OF SOUTH AMERICA.

One day, the fishermen brought us a fine "Poixe boie," or cow-fish, a species of manatus, and is particular abundant in the lakes in this part of the river. It was a female, about six feet long, and about five feet in circumference through the thickest part. The body is perfectly smooth, without any projections or inequalities, gradually changing into a horizontal semicircular flat tail, with no appearance whatever of blind limbs. There is no distinct neck; the head is not very large, and is terminated by a large mouth and fleshy lips, somewhat resembling those of a cow. There are stiff bristles on the lips, and a few distantly scattered over the body. Behind the

head are two powerful oval fins, and just beneath them are the breasts, from which, on pressure being applied, flows a stream of beautiful white milk. The ears are minute holes, and the eyes very small. The color is a dusky lead, with some large pinkish white marbled blotches on the belly. The skin is about an inch thick on the back, and a quarter of an inch thick on the belly. Beneath the skin is a layer of fat of greater or less thickness, generally about an inch, which is boiled down to make oil used for light and for cooking. The intestines are very voluminous, the heart about the size of a sheep's, and the lungs about two feet long and six or seven inches wide, very cellular and spongy, and can be blown out like a bladder. The skull is large and solid, with no front teeth; the vertebræ extending to the very tip of the tail, showing no rudiments of posterior limbs; the fore limbs, on the contrary, are very highly developed, the bones exactly corresponding to those of the human arm, having even the five fingers, with every joint distinct, yet inclosed in a stiff, inflexible skin, where not a joint can have any motion. The cow-fish feeds on grass at the borders of the rivers and lakes, and swims swiftly and paddles; and though the external organs of sight and hearing are so imperfect, yet these senses are said by hunters to be remarkably acute, and to render necessary all their caution and skill to capture the animals. They bring forth one, or rarely two, young ones, which they clasp in their arms, or paddles, while giving suck. They are harpooned, or caught in a strong net, at the narrow entrance of a lake or stream, and are killed by driving a wooden plug with a mallet up their nostrils. Each yields from five to twenty-five gallons of oil. The flesh is very good, something between beef and pork, and this one furnished us with several meals, and was an agreeable change from our fish diet.—*Travels on the Amazon.*

BRILLIANT STUCCO WHITEWASH.

Many have heard of the brilliant stucco whitewash on the east end of the President's house at Washington. The following is a recipe for it, as gleaned from the *National Intelligencer*, with some additional improvements learned by experiments:

"Take half a bushel of nice unslaked lime, slake it with boiling water, cover it during the process to keep in the steam. Strain the liquid through a fine sieve or strainer, and add to it a peck of salt, previously well dissolved in water; three pounds of ground rice, boiled to a thin paste, and stirred in boiling hot; half a pound of powdered Spanish whiting, and a pound of clean glue, which has been previously dissolved by soaking it well; and then hanging it over a slow fire, in a small kettle with a large one filled with water. Add five gallons of hot water to the mixture, stir it well, and let it stand a few days covered from the dirt.

It should be put on right hot; for this purpose it can be kept in a kettle on a portable furnace. It is said that about a pint of this mixture will cover a square yard upon the outside of a house if properly applied. Brushes more or less small may be used according to the neatness of the job required. It answers as well as oil paint for wood, brick or stone, and is cheaper. It retains its brilliancy for many years. There is nothing of the kind that will compare with it, either for inside or outside walls.

Coloring matter may be put in, and made of any shade you like. Spanish brown stirred in will make red pink, more or less deep according to the quantity. A delicate tinge of this is very pretty for inside walls. Finely pulverized common clay, well mixed Spanish brown, makes reddish stone color. Yellow ochre stirred in makes yellow wash, but chrome goes further and makes a color generally esteemed prettier. In all these cases the darkness of the shades of course is determined by the quantity of coloring used. It is difficult to make rules because tastes are different; it would be best to try experiments on a shingle and let it dry. We have been told that green must not be mixed with lime. The lime destroys the color, and the color has an effect on the whitewash, which makes it crack and peel.

When walls have been badly smoked, and you wish to have them a clean white, it is well to squeeze indigo plentifully through a bag into the water you use, before it is stirred in the whole mixture. If a larger quantity than five gallons be wanted, the same proportions should be observed.

THE USE OF HAY CAPS IS PRACTICAL ECONOMY.

On Tuesday, the 20th July, we struck into a three-acre field covered with a heavy stand of oats, which were to be cut and cured for fodder. A small portion of them had lodged. Enough of them were cut in the morning to make fifty large cocks, were left in the swath until just at night, when they were turned directly upside down, and remained in that position until the next day, Wednesday, when they were carefully spread, and before five o'clock in the afternoon, were all put up in large cocks, and covered with caps or covers, each two yards square.

During Wednesday night there was a heavy rain, accompanied with considerable wind, so that cocks not covered were pretty thoroughly drenched on Thursday morning.

On removing the caps from those that were covered at 10 o'clock on Thursday morning, the top of each cock was found so dry as to rustle like well-made hay, and was in good condition to go directly to the barn,—and no part of the cock was wet excepting a little on the outer edges of the base of the cock. The whole was then spread and carefully tended until quarter before twelve, when "thunder-heads" began to make their appearance in the West, and were soon followed by deep-toned rumblings in the far distant horizon.

At a little past one the oats were in the barn, dry, bright and sweet; the wind suddenly changed from the south-west to the north, and a drenching rain followed, which continued through most of the afternoon.

Each cock of the oats thus secured contained at least 200 pounds. If they had not been covered they could not have been sufficiently dried to go in between the time of spreading in the morning, and the time of the storm, which came on at a little past one, and it is a fair value we think to say that they were worth 80 cts. a hundred, and would have depreciated to 60 cts. if they had been wet again.

If this is right—and we believe every candid mind will concede it—the caps used for covering this crop, and which cost just 40 cts. each, were *entirely paid for in this single use of them.* There is no doubt whatever in our mind but such is the fact, and that hereafter we shall have the benefit of them as long as they shall last, without any cost whatever.

Hay caps will be nearly as common by-and-bye as hay cocks in haying time, merely because farmers will find out that *they cannot afford to do without them.* Of course, there will be some timid and scrimping geniuses that don't usually wake up till the next day, who will denounce the use of hay caps. That is all well enough with them, however, for if they had them, they would never find time to put them on.

BUTTER PASTURES.

There is a neglect in many of us in regard to pastures of any kind, and a serious neglect in regard to the pasturing for milch cows. With too many of us, if the herbage in a pasture comes up green in the spring, and continues so through the summer, it is a pasture. No matter what the kind of grass or herbage it is that gives the green color to the face of it, we turn in our cattle and let them "take chance," as the Irishmen say. Now the cow if she could speak would tell you in strong language, that every green field is not a pasture for her. Indeed, she does tell you every day in the quantity and quality of her milk, and in the quality of her butter and cheese, what the character of the pasture is.

The cow is an *animo chemico* manufacturer. Her duty is to manufacture the food that you supply her with into milk, butter, cheese, &c. According to the quality of the raw material given, will be the quality of the product. Oftentimes the poor cow is blamed and considered good for nothing, when her owner is to blame for supplying her with good for no hing material from which to make the product required.

A little observation will convince any one of this fact. In some rough pastures it is difficult to make much improvements or changes, but yet much can be done by the use of plaster, bone-dust, &c., and by scattering occasionally the seed of the best kinds of grasses.

Mr. Dickinson in an address delivered before the Tioga Agricultural Society in Pennsylvania, said, the "first quality of butter land is confined to portions of New England, New Jersey, and Pennsylvania and New York, while cheese and sheep can be grown wherever grass grows.

For this you must have in your pastures, Timothy (Herdsgrass,) white clover, blue grass, [what we call June grass.—ED.] red-top, pure soft water, and a rolling or hilly country. There will be then (when swarded over,) a solidity and sweetness to the grass, that will give to the butter that rich, sweet flavor that makes it so desirable. Butter partakes not only of everything the cow eats and drinks, but of every offensive thing within its reach after it is made."

He also advances the theory that butter made from red clover fed to cows, is good when first made, but when laid down in packages six months it seems to lose its flavor, and becomes more or less rancid, according as the clover she eat was rank and of rapid growth or not.—*Maine Farmer.*

EXTRACTS AND REPLIES.

OPERATION OF MOWERS.

Last week I saw four of these implements at work in the same field at the same time; with teams well trained and experienced guides. It appeared to be their purpose to show the comparative power of the machines. On looking at the ground on which they operated, after the crop was cleared away, the average width of the swath cut by each was found as follows:

Allen's	4 feet.
* Heath's	4¼ feet.
Manny's	3⅝ feet.
Russell's	3¼ feet.

One of the Manny machines was drawn a part of the time by a single horse, showing that the power necessary for the operation was at the command of the animal. I have heard of machines, designed to be drawn by single horses, cutting swaths three and three and a half feet in width, operating with entire success. Such a one is said to be made by Mr. Thompson, of Greenfield. I know a distinguished farmer who has ordered one for use on his own grounds, where I hope soon to see it in operation; for I have learned that actual view is the best evidence in these matters.

July 19, 1858. ESSEX.

* It is proper to say that the work done by the Heath or Eagle machine, was equal to that done by either of the others; while Allen's and Manny's machines were guided by men as expert at the business as any in the county.

POSTS FOR FENCES.

I wish to inquire about the best fence posts; where cedar cannot be obtained, what kind will last the longest—hemlock, black cherry, spruce, pine, cherry, beech, birch or maple?

W. C. WALKER.

Centre Rutland, Vt., July, 1858.

REMARKS.—Chestnut is undoubtedly among our best timber for fence posts. Cut it in September, take off the bark and set the posts on their ends, butt end down, and let them remain until the next spring. Then kindle a fire and char the end to be inserted in the ground, taking special pains to char two or three inches of the part that is to remain *out* of the ground. Good posts, say six inches in diameter, will last from twenty to fifty years, according to the nature of

the soil in which they are placed. White oak will probably come next to chestnut. We have had no experience with other timber for the purpose of posts.

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HOW TO DESTROY SWEET FLAG.

I see by the weekly perusal of your paper that it is customary among quite a class of your readers to ask all manner of questions on various subjects relating to the farm. Now I do not recollect of your being troubled by any of this class of aspirants for notoriety or knowledge in this old town—the home of as persevering and energetic farmers as can be found in New England. But there is one thing that troubles us a little, and I doubt not that some of your readers in other localities are troubled in the same way—hence this query: *how shall we manage to kill out a troublesome weed known as the sweet flag?* We have plowed it and burned it, but to no purpose but to increase the evil. One of my neighbors suggests salt. What is your opinion?

Chelmsford, Mass., 1858. T. J. PINKERTON.

REMARKS.—We are glad to hear from Old Chelmsford—it has many excellent farmers. The fine market at Lowell, where those thousands of hungry girls are to be fed, has stimulated the Chelmsford people to marked improvements in the cultivation of the soil. But our friends have found no way yet, it appears, to destroy the sweet flag, *Acorus Calamus*, which grows so bountifully in wet places all over New England. Digging will not kill it, burning the surface will not, salt will not, unless large quantities are used, but *thorough draining will.* It loves water as much as an old toper dislikes it, and where water abounds, is as tenacious of life as a cat. But a *warm, dry, porous soil is contrary to its nature, and in such a place it will soon give place to sweet, nutritious grasses.*

—

THE CROPS IN BERKSHIRE COUNTY.

Our crops are uncommonly good. Grass more than an average crop. Corn is very promising. Rye, oats and wheat are remarkably good. Potatoes are uncommonly thrifty, and will in all probability be a large crop, unless the disease should destroy them. In my orchard and fruit yard, the apple and plum set well, but have most all been destroyed by a sting of some insect I have not been able to discover. Even those that remain on the trees have "the mark of the beast," and will be imperfect; there will be very little fruit in this section. JUSTUS TOWER.

Lanesborough, July 19, 1858.

—

PRESERVING CORN FODDER.

As the season for laying in a stock of fodder approaches, I will give you my experience in saving corn fodder. As soon as my corn is all glazed, I cut it up near the roots with a sickle, and before any rain falls on it, bind it and stook it up, in which situation I let it stand till the corn is sufficiently cured for husking, say two or three weeks; after husking I make a mow of my stalks, a laying of stalks, say a foot deep, then sprinkle on salt sufficient to preserve from mould, then another layer of stalks. In this way I preserve them almost as green as when cut. I feed them to cattle once or twice a day, and they will eat them up as clean as they would good hay. In this way a farmer can save more fodder than he is aware of. His cattle eat up the stalks clean, and keep sufficiently salted through the winter. Just try it once. M. DURFEY.

Bristol, Vt., July 10, 1858.

—

WHAT IS THE BEST METHOD OF DESTROYING CATERPILLARS?

Thus far I have cut off the infested part and thrown it into very strong soap suds, but this is taking too much of the tree away. I would throw soap suds on the tree, but I have found by sad experience that strong soap and the foliage were not made to live together. I shall be thankful to learn of some cheaper method of destroying this pest, and perhaps there are others who would be as thankful as myself. O. A. C.

Easthampton, Mass., 1858.

REMARKS.—There is no better, cheaper or quicker mode of destroying caterpillars on trees than by the use of a good spiral brush made for the purpose, and attached to a pole. Two brushes are convenient—one attached to a long pole for the high parts of the tree, and another for the lower parts—but this is a matter of convenience merely.

—

A COLT INJURED BY RUNNING.

I have a valuable colt that shows a propensity to run in the pasture, in consequence of which he has injured one of his gambrel joints, and caused a puffy swelling on the joint, that resembles a spavin on the front side, and causes a large puff on each side where the skin meets between the joint and gambrel cord. I wish to inquire if you or any of your subscribers can inform me whether it is a spavin or not, and what remedy to apply. I am now bathing with cold water, and George W. Merchant's Gargling Oil. H. S. G.

West Bethel, Vt.

REMARKS.—If we had such a case we should consult Dr. G. H. DADD, Veterinary Surgeon, Boston.

—

BLACK POLAND FOWLS.

Can you inform me where I can obtain pure Black Poland Top-knot fowls, at a fair price?

Stafford, Vt., July, 1858. S. A. E.

REMARKS.—We cannot—do not know.

—

SURE CURE FOR COUGH IN HORSES.

Bleed in the neck three mornings in succession, three pints at each time. Try it.

Concord, Mass. F. E. BIGELOW.

—

GRUBS.

We do not recognize the grubs sent us by Mr. Broadhurst, of Bridgewater.

THE BLOOD.

It is a natural question, and often asked, but difficult to answer, what *quantity* of blood circulates every minute in our bodies? The many estimates which have been made need not here be given; only those of Lehmann, Weber and Bischoff now command general attention. Lehmann says that his friend Weber aided him in determining the quantity of blood in two decapitated criminals. The weight of the whole blood was to that of the body nearly in the ratio of 1 to 8. It is obvious from the account of the experiment that only an approximation could be arrived at. And Bischoff's more recent investigations on the body of a criminal, carefully weighed before and after decapitation, lead to the conclusion that the blood amounted to 9¼ lbs., or *exactly one-fourteenth of the whole body.* This nearly corresponds with his former investigations, which gave the weight as one-thirteenth of the whole body. If we say ten pounds for an adult healthy man, we shall probably be as near the mark as possible. The quantity, however, necessarily varies in different persons, and seems from some calculations to be greater in women than in men. In the seal its quantity is enormous, surpassing that of all other animals, man included.

In former days, blood-letting was one of the "heroic arms" of medical practice; and it is sometimes almost appalling to read of the exploits of practitioners. Haller mentions the case of a hysterical woman who was bled one thousand and twenty times in the space of nineteen years; and a girl at Pisa is said to have been bled once a day, or once every other day, during several years. A third case he mentions of a young man who lost seventy-five pounds of blood in ten days; so that if we reckon ten pounds as the utmost which the body contains at any given period, it is clear that this young man's loss must have been repaired almost immediately. In truth, the blood is incessantly being abstracted and replaced during the ordinary processes of life.—Were it not continually renewed, it would soon vanish altogether, like water disappearing in sand. The hungry tissues momently snatch at its materials as it hurries through them, and the active absorbents momently pour fresh materials into it.

In contemplating the loss of blood from wounds or hæmorrhage, and in noting how the vital powers ebb as the blood flows out, we are naturally led to ask whether the peril may not be avoided by pouring in fresh blood. The idea of *transfusion* is indeed very ancient. But the ancients, in spite of their facile credulity as to the effect of any physiological experiments, were in no condition to make the experiment. They were too unacquainted with physiology, and with the art of experiment, to know how to set about transfusion. Not until the middle of the seventeenth century had a preparation been made for such a trial. The expemiments of Boyle, Graaf and Fracassati, on the injection of various substances into the veins of animals, were crowned by those of Lower, who, in 1665, injected blood into the veins of a dog. Two years later a bolder attempt was made on man. A French mathematician, Denis, assisted by a surgeon, having repeated with success the experiments of Lower, resolved to extend the new idea. It was difficult to get a human patient on whom the plan could be tried; but one evening a madman arrived in Paris quite naked, and he was daringly seized by Denis as the fitting subject for the new experiment. Eight ounces of calf's blood were transfused into his veins. That night he slept well. The experiment was repeated on the succeeding day; he slept quietly, and awoke sane!

Great was the sensation produced by this success. Lower and King were emboldened to repeat it in London. They found a healthy man willing to have some blood drawn from him, and replaced by that of a sheep. He felt the warm stream pouring in, and declared it was so pleasant that they might repeat the experiment. The tidings flew over Europe. In Italy and Germany the plan was repeated, and it now seemed as if transfusion would become once more one of the "heroic arms" of medicine. These were soon dashed. The patient on whom Denis had operated again went mad, was again treated with transfusion, and died during the operation. The son of the Swedish minister, who had been benefited by one transfusion, perished after a second. A third death was assigned to a similar cause; and in April, 1668, the Parliament of Paris made it criminal to attempt transfusion, except with the consent of the Faculty of Paris. Thus the whole thing fell into discredit, to be revived again in our own day, and to be placed at last on a scientific basis.

It will immediately occur to the physiologist who reads the accounts of these experiments, that transfusion was effected on the supposition that the blood of all quadrupeds was the same, and that it was indifferent whether a man received the blood of another man, or of a sheep or calf. This supposition was altogether erroneous. The more rigorous investigations of the moderns have established that only the blood of animals of the same species can be transfused in large quantities without fatal results. The blood of a horse is poison in the veins of a dog; the blood of a sheep is poison in the veins of a cat; but the blood of a horse will revive the fainting ass. From this it follows, that when transfusion is practised on human beings, human blood must be employed; and so employed, the practice is in some urgent cases not only safe, but forms the sole remedy. Blundell has the glory of having revived and vindicated this practice, and he has seen his idea amply confirmed. Berard cites fifteen distinct cases of hæmorrhage in which tranfusion has saved life.—*Blackwood's Magazine.*

THE ADVENTURES OF A SEED.

Nature has arranged that plants growing even in the burning desert shall be provided with enough of water for the generation of their seeds; and one of the most remarkable instances of this fact is furnished by the Anastatica Hierochuntica, or rose of Jericho, which grows in the arid wastes of Egypt, Palestine and Barbary; upon the roofs of houses and among rubbish in Syria; and in the sandy deserts of Arabia. This little plant, scarcely six inches high, after the flowering season loses its leaves, and dries up into the form of a ball. In this condition it is uprooted by the winds, and is carried, blown, or tossed across the desert into the sea. When the little plant feels the contact of the water, it unfolds itself,

expands its branches, and having become thoroughly saturated with sea water, are carried by the tide and laid upon the seashore. From the seashore the seeds are blown back again into the desert, where, sprouting roots and leaves, they grow into fruitful plants, which will in their turn, like their ancestors, be whirled into the sea. These regular periodical processes of the life circle of this wee rose struck the simple imaginations of the men of old with superstitious awe, and they invested it with miraculous virtues.—*Dickcn's Household Words.*

For the New England Farmer.

TEN PER CENT. INCOME IN FARMING!

The agriculture of New England is now a matter of much thought and discussion, and very reasonably, too. A new era has dawned upon farmers within twenty years. Science and elaborate theory, submitted to the test of experience, have come to the aid of the blind, traditional routine, which, half-guess work and half-careless and unreasoned experiment—formerly regulated the practice of agriculturists. Our farmers have learned that books as well as works have their province and their value. A long and distrustful observation has taught them, that *book farming* may instruct and aid *practical skill*, although it is not sufficient to supersede it. They know now, that the chemist in his laboratory, the natural philosopher in his study, and the botanist on his rambles, to some ignorant wiseacres unmeaning, are all at work for him. Theory and practice, after a coy courtship and interminable quarrels, are now comfortably wedded, and the results of the whole will be—Order from chaos, intelligent and educated system from blind groping, clear, determined and well calculated processes in lieu of random ventures or apathetic fogyism. Our climate is rough, our soil hard. Among our products are not the rich and luxurious harvests that have always typified agricultural wealth. We cannot grow the olive, the orange or the vine—the great staples of rice, cotton, tobacco or sugar. *We do not grow*, (I will not say we cannot, for I know better by actual trial) the wheat, the queen of breadstuffs. Yet New England is or may be, if she chooses, the wealthiest, happiest and most truly comfortable country on the face of this earth. This comes about from careful, intelligent, well directed and energetic industry. Apply to our farming the system which has placed our manufactures and commerce where they are; and we need envy the harvests of no country, however favored by nature. Where nature does most, perverse man always does least, and the hard conditions she imposes upon us bring a blessing with them—the priceless gift of an invincible perseverance and an intelligent and restless energy that overrules all obstacles.

My purpose at present is, however, not to write an essay, but simply to state an encouraging fact. No man, who carefully examines, will conclude that agriculture is necessarily unprofitable here. If we adapt our system to circumstances, and philosophically and carefully follow it out, we can satisfy every reasonable desire.

Now for the fact, which I would reccommend to the attention of our young men who are sighing for Western prairies or other El Dorados.

Four years ago I purchased a farm of 33 acres, of good land naturally, but neglected for a long while, and in low condition. For three years, it was highly manured and carefully cultivated, and three-fourths of the arable land—one-fifth of the farm being in wood, is now brought up into good heart.

Last year, we grew upon it corn, onions, carrots and some small vegetables, and part of the land, which had been laid down to grass, came into full perfection for the first time. Our crops were all good, except potatoes, which were very light, but none of them very remarkable. I have kept a careful account with the farm; and I find that last year it paid just about ten per cent. net income, all expenses paid—upon its cost. Yet one-half of the estimated value is in buildings; and full one-fourth of the cultivable land is yet worn out and neglected grass land, which we have not yet been able to take in hand. I cannot take to myself much of the credit of the good husbandry. I am a professional man, with enough of other matters to occupy my time. But I was fortunate in the services of a thorough, practical, economical and energetic farmer. To him—Mr. LUKE PUTNAM, the result is due; for I was able to exercise only a slight general supervision.

We tried no extra schemes, and had, in no crop, any extraordinary success. If any deduction should be made tending to reduce the proceeds of this year's work to an average of a greater length of time, it could be found only in one fact. And that is, the high condition from generous cultivation of preceding years of much ground, which being then laid down to grass, gave us handsome returns with small outlay. It is my deliberate opinion, that this farm, under judicious and careful management, can be made to pay regularly an interest of eight per cent. It should be stated, however, that it contains no waste land, and is well situated, being about four miles from Salem, two miles from South Danvers, and fourteen from Boston, with good railroad facilities. It is, therefore, convenient for obtaining manure and disposing of crops. How many better chances of independence and thrift could a young man find any where? GEO. H. DEVEREUX.

Salem, Mass., 1858.

CURRANT WINE.

This article, as usually manufactured, is rather a cordial than a wine, and is entirely inferior to the commonest imported wine; but when properly made, it will be found to be a very superior, healthful beverage, particularly for summer drink, when fully diluted with water.

We have experimented carefully on the making of currant wine, and the following will be found to give a result which we have found no difficulty in selling in large quantities at $1 per gallon.

Before expressing the juice from the currant, pass them between a pair of rollers to crush them, after which they may be placed in a strong bag, and they will part with the juice readily by light pressure, such as a common screw, heavy weights, &c. To each quart of juice add three pounds of double refined loaf sugar—single refined sugar is not sufficiently pure—then add as much water

as will make one gallon. Or in other words, suppose the cask intended to be used to be 30 gallons. In this put 30 quarts of currant juice, 90 lbs. of double refined sugar, and fill the cask to the bung with water; roll it over until the sugar is all dissolved. This will be told by its ceasing to rattle in the barrel. Next day roll it again, and place it in a cellar where the temperature will be sure to be even. Leave the bung loose for the free admission of air. In the course of one, or two or three days, fermentation will commence. By placing the ear to the bung-hole, a slight noise will be heard such as may be observed when carbonic acid is escaping from champagne or soda water. Fermentation will continue for a few weeks, converting the sugar into alcohol. As soon as this ceases, drive the bung in tightly, and leave the cask for six months—at the end of which time the wine may be drawn off perfectly clear, without any excess of sweetness.

The reason why double refined sugar should be used may thus be understood. Ordinary sugar contains a half of one per cent. of gum, which, when dissolved in water, becomes fetid. Suppose, then, four, or five ounces of gum dissolved in a barrel of water, we can readily understand that at the end of a few months this water will be very foul in flavor; and most of the currant wine offered for sale, made from loaf sugar of common quality, and often from sugar very inferior to this, such as white Havana, &c., contains gum in this fetid condition, and its foul flavor is an amalgamation of sugar, currant wine and fetid gum. When double refined sugar is used, all these difficulties are avoided.

No alcohol should be added. The practice of putting in small quantities of brandy and other liquors, makes a cordial, and not a wine. All the sugar used may be so much fermented as at least to change its character chemically, and this change will produce all the alcohol required.—*Working Farmer.*

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—"Essex" says, in the *Farmer* just come to hand, "there is reason to believe that the principle on which the Heath mower is constructed, will be found the very thing that is needed. I wish he had been more explicit in the description of the principle to which he refers; and which distinguishes it from Allen's or Manny's machines, if there be any such principle. I have seen them all operating in the same field, at the same time; and seen the ground where they had operated; and the only dintinction I could observe on the ground was, that the swath cut by the Heath was from six to nine inches wider than that cut by either of the others. On inquiry of those who guided them, each gave the preference to the machine he guided.

The Allen machine appeared to me the most compact, and easiest guided, and least likely to get out of repair. I am informed by an industrious farmer of this neighborhood, that he has already cut three hundred tons of hay this season, with his Allen machine, without incurring one dollar expense for any repairs, other than the ordinary sharpening of the knives, such as is applied in the grinding or whetting of scythes This would seem to be a near approah to complete work, in the cutting of grass. I admire the facility with which it could be thrown out of gear, by the application of the hand to a lever in front of the driver. It seemed to me, other things being equal, this appendage gave it a decided preference over either of the other machines. But it may be, a skilled mechanic can discover in the others something to counterbalance this advantage.

If we are to have such a continued superabundance of wet as we have had for a fortnight past, it will be of little use to grow hay or to cut it, for it will be worth little or nothing when cured, under such influences. A. B.

July 24, 1858.

THE CULTURE AND HARVESTING OF BEANS.

It may, perhaps, be received as an indication that the bean loves a rather dry and warm soil, because it is a native of far eastern and warm countries, as it was cultivated in Egypt and Barbary in the earliest ages of which we have any records. The bean is now in very common use as food for man, and is frequently found in one form or another, on the tables of all classes of people in our country, and the demand for them, we think, is perceptibly increasing. Their proportion of nutritive matter, compared with other grain, is, according to Einhof, as follows:

	By weight.	*Or in a bushel.*
Wheat	74 per cent.	about 47 lbs.
Rye	70 "	39 "
Barley	65 "	33 "
Oats	58 "	23 "
Beans	68 "	45 "
Peas	75 "	40 "
French Beans	84 "	54 "

In England, large varieties of beans, such as the *Flowering Marsh*, for instance, are raised in quantities, ground into meal, and fed to horses; indeed, they compose the principal food of the farm and team horses. This practice has not found favor in this country yet, probably from the want of some one or more to lead in it. In the former country, bean meal, given to oxen, is supposed to fatten them rapidly, and mixed with water, and given as a drink to cows, greatly increases their milk. With this declaration, and their long and multiplied instances of experience before us, ought we not to experiment for ourselves in this matter, and learn whether we cannot fatten our stalled cattle to better advantage on bean meal, or partially so, than to feed them exclusively on corn meal?

The idea is certainly common with our people, and is illustrated in thousands of instances every year, that beans do not require a rich soil, and we therefore see them all over New England, at least, growing on the lightest lands of the farm, such as plains, or very light loams. It is supposed by many that they will actually do better on such

soils than on heavier ones, while others put them there, thinking them a more suitable crop than Indian corn or the smaller grains.

This is not the opinion of the English farmers; they say that "all the varieties thrive best on strong clay soils, heavy marls, and deep loams of a moist description. In such soils the produce is sometimes *thirty* to *sixty* bushels per acre, but an average crop on moderate land is about half that quantity."

A common error with us in the cultivation of the bean, is crowding them too much. They require air, light and heat, to surround them freely, and in order to secure this they should be planted in rows about three feet apart, and the hills in the rows at least two feet apart. Some varieties, perhaps, requiring more room even than this, and some considerably less. They will not perfect themselves and yeild a profitable crop, when the leaves next to the stalk die early and drop off, as their loss deprives the plant of a portion of its energy to ripen the crop which it has set.

Another error is, the placing too much seed in a hill. This depends somewhat upon the variety, as the small white bean will permit more seed in the hill, than the dwarf horticultural, or some other varieties. Any person may decide for himself what is best in this particular by a few years' close observation.

Many good crops of beans are greatly injured in harvesting them. Few fields are rarely ready for gathering all at the same time. When the leaves begin to lose their green color, and the pods to turn gray, purple, or black, the cultivator should go among them and select such, pull or cut them up, and if there is a clear sun expose them to it for a few hours. A cheap and convenient way of curing them then, is, to set birch or other poles in the ground, whose branches have been mainly cut off, but leaving some six or eight inches in length attached to the main stem. Then surround these poles with the beans, laying the roots inside, and continue building up towards the top of the pole as far as is convenient, or laying on as much as the pole will sustain. In this way the beans and plants dry bright and sweet, leaving none of that musty flavor which is almost certain to follow where beans are cured on the ground, or thrown in masses upon walls, or rails put up for the purpose. In the use of poles, beans may be gathered before the vines have lost all their green appearance, and the beans themselves will afford a larger and better crop than if allowed to ripen upon the standing vines.

THE VEGETABLE CATERPILLAR.—A specimen of this very wonderful caterpillar was presented to the Banff Institution for Science. One half of it, strange to say, is animal, and the other vegetable. The thicker part, which is animal, has quite the appearance of an ordinary caterpillar, being about two inches in length—very much indeed like what is familiarly known in north country districts as the heather-worm. The vegetable part is like a root or stem, some three or four times the length of the animal, but scarcely one-third of the thickness.—*Banffshire Journal.*

For the New England Farmer.

SOW WINTER WHEAT.

While I am sure I am addressing a few of your farming readers upon my favorite farm topic, that have had the wisdom and perseverance to raise their own bread, I am quite as sure a great majority are yet slumbering, lest they should lose time and money in the attempt to raise wheat.

Every barrel of flour (which is cash on delivery) must remind the thinking farmer, that this is part and parcel of his own business. The question must naturally arise,—why should I be eating flour that my brother farmer raised two or three thousand miles from this? I can raise big crops of barley, oats and rye, why not wheat, the most needed crop of all, for my family's wants? Happy conclusion! I have long been faltering, have tried "Sorgho" experiments, "mulberry" experiments, and now, lastly, shall I try the great wheat experiment? Farmers, my word for it, it will bring honey to your hives.

Do not let the last week in August or the first week in September find you with less than four to six bushels of winter wheat in the ground. (Plenty of expresses in all directions to Boston, and abundance of seed wheat at the *Farmer* office.)

Sow early to insure you against winter kill, especially if on clayey, heavy soil. Do you ask a reason for this? I answer, it gets depth and strength of root, which anchors it fast in its bed; thawing and freezing will not throw it out. All that is gained in this fall's growth, by early sowing, is so much gained for an earlier summer harvest. Rust, your worst enemy, too often catches late spring wheat, always a precarious crop, and makes poor flour in comparison.

On good tillage land, wheat will do well. Cultivate and manure as you would for any grain crop. Lime or ashes are good to cultivate or harrow in. Use a cultivator or very light plow if possible, for covering. Pasture or mowing sod is good. My best crop was on mowing sward. Soak the grain in salt pickle, say twelve hours, and if weevil or insect eggs are deposited in the berry, as with the pea, it may prove of great benefit. Rake the grain in ashes while moist and it comes up very quick.

I hope to hear through your excellent paper, from those farmers who have not only been petitioners, "Give us this day our daily bread," but those who have been doers in a work so easy of accomplishment, so needful to their wants, so indispensable to every free-holder and farming household in the New England States.

Mr. Editor, do you believe the soil of New England lacks any of the vegetable elements necessary to produce wheat? If not, and should there be a general interest felt and adopted by the far-

mer, as with his other crops, would not the whole list of agriculture be complete in your land? This, in addition to your perfect science and high attainments in horticulture, would put you far in advance of any other portion of our country.

New York, July 24. HENRY POOR.

REMARKS.—We are happy to be able to encourage our earnest friend, and friend of all farmers, by saying that his preaching and practice have encouraged a great many to try a crop of winter wheat. Fields of it are often seen now where it has never been attempted until recently. We hope the good advice given by Mr. POOR will be well considered. He is a practical man, and speaks of what he has done with the wheat crop himself.

For the New England Farmer.

STOOKING GRAIN.

In riding about the country just now while farmers are cutting their winter grain, I am reminded of an intention that existed too late to ripen last year. This was to call attention to the mode of stooking grain. In the showery weather of last year, I saw not a little grain greatly damaged for want of being properly put up. Now it is just as easy to put grain up in the stook so that it shall shed rain for a fortnight, as it is to set it up as it is often done.

The plan is this. I can vouch for its correctness, both from personal trial and from seeing grain stand, put up by my father, through weeks of dull weather, without hurt. The bundles should not be too large. Then ten and only ten should be put together. Select the two straightest and evenest bundles for the caps. Then of the others, take one in each hand by the tips, and chuck their butts firmly upon the ground about a foot apart. Bring the tips closely together. Put up four more in the same way, leaving a space of six inches between each couple. They will then stand in two parallel rows, three in a row. Now put one at each end, and bring the tops all closely together with the hands. They will stand thus:

In this arrangement they will stand firmly, and the air will readily circulate between them. Now take the caps and slip the straw in the band so that it shall be shorter above the band where the cap is in place on the side of the tie. As the straw is rolled together in binding, it will readily separate at this place to the centre of the bundle. Having the hands in the bundle, place the upper part of the opening near the base on the end bundle below all the heads, and raise it carefully up till it covers half the stook. Do the same with the other, and bring the two inclined butts together in the centre of the stook. Now spread out the straw so as to cover the whole, and if you have done it well, you need not fear a long storm, for the stook will stand up and shed rain, while the interior will readily cure by the circulation between the bundles. It will be seen that in this way the outside of the stook is completely thatched by straw that meets in the middle and slopes off every way.

If this is a long description, Mr. Editor, bring on your grain, and I'll put it up in half the time I have been writing this. J. H. A.

Hinsdale, N. H., 1858.

CORNFIELDS.

When on the breath of autumn breeze
From pastures dry and brown,
Goes floating like an idle thought
The fair white thistle-down,
O, then what joy to walk at will
Upon the golden harvest hill!

What joy in dreamy ease to lie
Amid a field new shorn,
And see all round on sunlit slopes
The piled-up stacks of corn,
And send the fancy wandering o'er
All pleasant harvest fields of yore.

I feel the day—I see the field,
The quivering of the leaves,
And good old Jacob and his house
Binding the yellow sheaves;
And at this very hour I seem
To be with Joseph in his dream.

I see the fields of Bethlehem,
And reapers many a one
Bending unto the sickles' stroke,
And Boaz looking on;
And Ruth, the Moabite so fair,
Among the gleaners stooping there.

Again I see a little child,
His mother's sole delight,
God's living gift unto
The kind, good Shunamite;
The mortal pangs I see him yield,
And the lad bear him from the field.

The sun-bathed quiet of the hills;
The fields of Galilee,
That eighteen hundred years ago
Were full of corn, I see.
And the dear Saviour takes his way
'Mid ripe ears on the Sabbath day.

O, golden fields of bending corn,
How beautiful they seem!
The reaper-folk, the piled-up sheaves,
To me are like a dream.
The sunshine and the very air
Seem of old time and take me there.

THE HORTICULTURIST.

This time-honored, instructive and popular periodical, is now published by C. M. SAXTON, Esq., 25 Park Row, New York city. After a long, useful and successful career in book publishing, and a *pioneer* publisher of agricultural works, Mr. Saxton retired for a while to the fresh fields of his farm in Orange, N. J., to recuperate his energies by stirring the soil and new mown grass, and breathing the pure air away from city life. But the old love came back to him, after a brief repose with his family and his heifers and pigs and poultry, and he is now in his old line again, and sending out monthly the *Horticulturist*, in a most neat and attractive style, and is ready to serve his fellow-men in any honest way that will promote agricultural pursuits, but especially so, in *publishing* agricultural works.

THE GLOUT MORCEAU PEAR.

[*Pronounced* Gloo-mor-so.]

The pear which this beautiful cut illustrates, grew in the garden of Mr. HENRY VANDINE, of Cambridgeport, Mass., a cultivator of fruits and flowers well known to this community as a successful grower of some of the finest specimens of fruits which have been presented at the exhibitions of the Massachusetts Horticultural Society.

The specimen we now represent by the cut grew on a tree *twenty* years old, having *quince roots only*, and is now about six inches in diameter. In the month of December, or January, when the Glout Morceau is in perfection, Mr. Vandine has frequently received between two and three dollars per dozen for it, and finds the market quick. The description below is by Downing.

The Glout Morceau is universally admitted to be one of the most delicious of the recent Flemish winter pears; and as it is perfectly suited to our climate, bearing excellent crops, it should have a place in every good garden. It has been confounded with the Beurre d'Aremberg, but is readily distinguished from that pear by its sweeter, more sugary flavor, more oval figure, and more slender stalk. The growth of the tree is also distinct, having dark olive shoots, spreading and declining in habit, with wavy leaves.

The signification of Glout Morceau is *greedy morsel*; but Mr. Thompson suggests that this or the synonyme Goulu Morceau is used (in the same sense as *pois goulu*, i. e. sugar peas,) to signify honied or sugar pear, which is most appropriately applied to the present fruit.

Fruit rather large, varying in form, but usually obtuse-oval, and wider towards the stalk than Beurre d'Aremberg. Skin smooth, thin, pale greenish-yellow, marked with small green dots, and sometimes with thin patches of greenish-brown. Stalk rather slender and straight, an inch or more long, planted in a small, regular cavity. Calyx usually with open divisions, set in a moderately deep basin. Flesh white, fine grained, and smooth in texture, buttery, very melting, with a rich, sugary flavor, with no admixture of acid. December.

For the New England Farmer.

SCYTHE PHILOSOPHY.

DEAR FARMER:—Have we no scythe philosophy, no system for fitting up the most important tool the farmer uses, the scythe? One prefers a long scythe, crooked at the heel and straight at the point; another prefers it crooked at the point, and straight at the heel; some short, &c. The same opinions prevail with regard to snaths, so that a scythe maker may make a lot of scythes of all lengths and shapes, expecting they will suit some one. When the mower goes for a scythe and snath, if he has any scythe philosophy in his head, he goes to the loft with hammer and wrench, and commences measuring and trying, hanging and unhanging, trying which long scythe is the crookedest, and which stiff snath has the least unnecessary crooks. Go amongst the mowers, and no two scythes are alike, so each one must get used to his own scythe, and no other. Now the whole thing is wrong. Each and every man needs a scythe and snath alike, except a little difference in length of geer, to proportion it to the length of the man. Scythes and snaths should be number one, two and three, and fitted before they leave the scythe manufactory, so that they will go together without fitting or altering. Scythes should be crooked alike, from heel to point, and be made more crooked than they are; the snaths should have two crooks, all others are unnecessary. A crook at the right hand nib to fetch the hands nearly level when the scythe rests upon the ground, and the man that holds it stands erect; the other near the lower end, to turn the edge down so low as to make it range with the left hand nib, or a little inside of it, that the cut and draught shall agree.

A snath for a man 5 feet 11 inches, or over, in height, should be 2 feet 8 inches from the right hand nib to the lower end, and the scythe for such a snath should be 4 feet 3 inches long on the edge before it is bent; the bend should be a circular bend till the edge in the middle is 6 inches from a right line with the edge at both ends.

No. 2 scythe, 2 feet 6 inches from lower nib to end of snath, scythe 4 feet edge, bent 5½ inches, for men from 5 feet 8 to 5 feet 11.

No. 3, for short men and boys; snath 2 feet 4, scythe edge 3 feet 9 or 10 inches, crook in proportion to others.

The benefits resulting from such arrangements must be evident to all. One of our greatest difficulties arises from the weakness or elasticity of the snath. No man can mow fast or easy, with a scythe that springs, or tumbles in the grass. If the iron snath made by LAMSON, GOODNOW & Co., was bent as it should be, and the patent heel rigging left off, and a good wrought iron heel put in its place, it would be far superior to any thing of the kind. It is well known that there are certain men that can cut as much grass in one day as other men of equal strength can in two. That is owing to two things, namely; skill in rigging up the scythe, and second, in striking it into the grass. Some of the readers of your paper may recollect two men that mowed for Erastus Swift, of Addison, Vermont, in 1830, by the acre, and he paid them for mowing 7¾ acres a day, for every working day, till his hay was cut Those men mowed with No. 1 scythes as above mentioned.

Now, if a little skill can save one-third to one-half the labor of mowing, 'tis worth looking after. A question arises with me, and perhaps with others, who is to get up the alteration in the scythe, and write out a *scythe philosophy* to direct the young mower how to strike the scythe into the grass?

Too many mowers stand too far off from the grass, and strike too rounding a stroke. Some weight is necessary in scythe and snath to give stability to the motion. GREEN MOUNTAIN.

Middlebury, Vt., July, 1858.

WILLIS' IMPROVED STUMP MACHINE.

Some two or three years ago we witnessed the operation of this machine, and then spoke at some length of the wonderful power it possesses, and of the great facility and ease with which it moves extremely heavy bodies, or those which are fast-rooted into the earth. Since that time it has received some improvements, and repeatedly new tests have been made with it, which places it beyond all doubt at the head of any machinery within our knowledge for extracting stumps, transplanting large trees, or removing large rocks or buildings.

It is simple in its construction, and its leverage power is so great that a single horse can easily draw from three hundred to five hundred tons. It must be of great importance to railroad contractors.

Our own opinion of the machine now being understood, we will give that of one or two others. The *Republican Citizen*, published in Maryland, says:—It did not only perform all that the inventor, Mr. Willis, had notified the public that it would, but executed its work in such a manner as to produce astonishment and delight; and the general impression was, that a resistance could scarcely be opposed to it that it could not overcome. Trees, stumps and rocks, were removed from the places where they have rested for centuries, with very little regard to their size or weight—the power seeming almost unlimited.

The *Philadelphia Public Ledger*, speaking of a trial of the Extractor near that city, says:—Two old chestnut trees, each one three feet in diameter, were removed in 8 minutes; one of them in 4½ minutes, by the aid of *six men*, and the other in 3½ minutes with two horses.

Mr. LEONARD WARD, of Orange, Mass., says:—I have recently moved a meeting-house in Orange the distance of 240 feet, on an inclined plane of 19 feet. The time occupied, in using Willis' machine, was one day. With the machine I turned the house one-quarter round. It was judged to weigh from 75 to 100 tons.

Some fifteen of these machines have been ordered from Chili, in Peru, where the article of fuel is extremely scarce and high, and an ordina-

ry stump is worth one dollar standing in the ground. During the dry season, which is one-half of the whole time, trees send their roots very deep into the earth, and until they had Willis' machine, it was next to impossible to avail themselves of them. But this powerful Extractor unearths them with ease, when they afford our neighbors, the Chilians, a considerable supply of fuel. Address W. W. Willis, Orange, Mass.

For the New England Farmer.

UNDERDRAINING.

For the purposes of draining, we may safely neglect the more particular geological classification of soils, and consider them only in two forms, pervious and impervious; soil through which water will readily pass, such as loam, sand and loose gravel, on the one hand, and that which retains it a great length of time, as clay, gravel cemented with oxyd of iron or hard-pan, on the other. The distance at which drains may be laid and do the best service at the least cost, depends in a great measure upon the kind of soil to be treated; and this point needs close attention,—for the cost of every drain laid more than is necessary, is thrown away; but it is on the other side, in laying too few drains, we are most likely to err; in which case, a much less return will be received, in proportion to the amount expended, than if the work is thoroughly done.

There is, in most cases, but little regularity in the strata of the subsoil, and the cuts often seen in works on draining, representing half-a-dozen different layers of soil all of the same thickness, and having the same inclination, are in a measure deceptive. I would not, of course, convey the impression that there is but little *general* regularity in the strata, but only that it is not so minute and certain in its regularity as to enable a person to know, from the strata shown by opening a single drain, that his entire field is of the same materials, lying in the same direction, and at the same distance from the surface, as that shown in the drain he has opened.

Each field should be carefully examined before draining, by an exploratory drain, or by trial holes, and the drains laid so as to cut the lowest point of a porous strata, and carry the water as quickly as possible from the land; for this purpose, in most cases, the drains should run on the line of steepest descent, as the sub-strata is more likely to crop out on the side of a hill, than to run down parallel to its surface, and if the drains run on the steepest descent they will tap and draw the water from each strata before it arrives at the surface, and the drains, having a greater fall than could be obtained in any other way, will discharge the water in the shortest possible time.

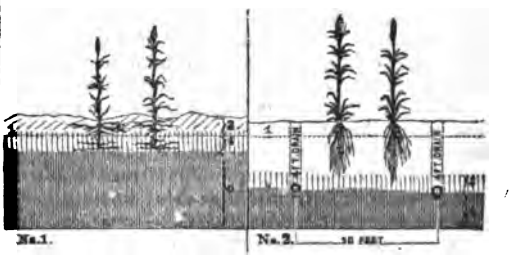
If, on making examination, it is found that the strata does run nearly parallel with the surface, the water will be collected better by drains laid on the half-rise; a very good fall can usually be secured for drains laid in this direction. The same field may need different treatment in different parts. Drains are sometimes laid across the slope, but they are, for various reasons, much less effectual than when laid on the line of steepest descent, or on the half-rise.

A drain, driven across the slope, may leave untouched a strata of porous material, which, cropping out a few feet below the drain, brings to the surface its collected waters, or if the drain cuts through the porous strata into a retentive one part of the way, yet the unequal thickness of the porous strata will carry a portion of it below the bottom of the drain, and water will be discharged at the surface as before; or, allowing neither of these cases to exist, but the bottom of the drain to be in a retentive strata throughout its whole length, yet the water will linger in the drain for want of a sufficient fall to carry it off, and lying against the lower side, will ooze through at points where the soil is less retentive.

Another reason why draining should run on the steepest descent, is, that all water lying on a level with the bottom of the drains can find an outlet into one or the other, by running a little more than half the distance between them, but in the case of drains across the slope, as the water acts only by gravity, none of it so situated as to depth can run into the upper drain, but all must find its outlet through the lower one, and half the water, in order to reach it, must travel from one-half to the full distance between the two. Water stands nearer the surface at a greater distance from the drains; therefore, in order to keep the water table at a proper depth, the drains across the slope must be deeper than if run on the steepest descent. In very steep lands the direction of the natural cracks is across the slope, and the steep drain, cutting through them, relieves them of their water.

A simple illustration will show the effect which stagnant water, within a foot or two of the surface, has on the roots of plants.

Perhaps it will aid the reader who doubts the benefit of thorough draining in case of drought, to see why it is beneficial.



No. 1.—Section of land before it is drained. No. 2.—Section of land after it is drained.

In the first figure, 1 represents the surface soil, through which evaporation takes place, using up the heat which might otherwise go to the roots of plants; 2 represents the water table, or surface of stagnant water, below which roots seldom go; 3, water of evaporation; 4, water of capillary attraction; 5, water of drainage, or stagnant water.

In the second figure, 1 represents the surface-soil warmed by the sun and summer rains; 2, the water-table nearly four feet below the surface,—roots of the wheat plant have been traced to a depth of more than four feet in a free mold; 3, water of capillary attraction; 4, water of drainage, or stagnant water.

Boston, Aug., 1858. J. Herbert Shedd.

For the New England Farmer.

THE PEAR ON QUINCE STOCKS.

Quite a war has been waged within the last two or three years against the culture of the pear on the quince. The battle of words has run high and been fiercely hot, and each argument for and against has no doubt been thought by its exponent as conclusive. Under certain circumstances, each may perhaps have been right, while facts on which to form general conclusions, may not, as a general thing, have been reached.

Our experience in the matter, probably not as extensive as that of many, has led us to believe that under certain circumstances as positive success will attend this species of culture as is generally found in apple tree growing, while under other circumstances it may prove a failure. The soil must be favorable for both pears and the quince. If nature has not made it so, we must, for it is of no use to attempt to grow dwarf pears more than any other fruit tree on an unfavorable soil. Ours are on an open limestone loam; the soil was deeply spaded and pulverised before transplanting them.

In our first effort with half a dozen trees our success was not very flattering, owing, probably, to a lack of knowledge. The pear was set high in the quince, and we did not set the quince under ground in all cases as we should have done. Seeing the rapid growth the pear was making over the quince, we found our mistake, and that we must re-set or have short-lived trees. This re-setting was done early the following spring, and about forty trees added to the last, in making our order for which, we requested those inoculated near the ground. In this purchase, the union between the pear and quince was from three to four inches lower than in those of the former purchase. These, in a soil made deep, (it was not naturally so,) were easily set with the quince all covered; the growth so fine that an accession was made to the number the following year, all of which have done and continue to promise well; much better than young apple trees have all around me, set and managed in the usual careless way. Many of them made a growth of branches more than four feet long the last season, and nearly all giving an abundance of blossoms this spring, from which fruit enough, and in some instances too much, set.

In our after culture, we keep the entire plot free from grass and weeds. Frequent hoeing, especially in dry times, is very beneficial to them, by keeping the earth open and saving thereby the necessity of watering. In autumn we place a bushel of manure around each tree. For this purpose swamp-muck composted with lime-ashes or well-rotted yard manure is best, from the fact that it is most durable. Early in spring this is spread at some distance from the body of the tree, as we suppose the fibrous roots have travelled in search of food, and the ground is forked, using the utmost care not to disturb root or rootlet. Such has been our course of culture, and thus far it has been attended with desirable success. We have had no trouble with disease or insects, and the trees bid as fair to reach the age of Methuselah as any other standards we have. Care in the culture of any fruit tree is necessary, and dwarf pears require it in common with others, perhaps more; but if given at the proper times, it requires less than often imagined, and if comfort or luxury pay for the labor at whose price they are purchased, in any, they will certainly pay in dwarf pear culture. W. B.

Richmond, Mass., 1858.

EXTRACTS AND REPLIES.

CROPS TO FOLLOW TURNIPS.

Will you inform me what crops will succeed well after a crop of turnips or ruta bagas, and what will not? A SUBSCRIBER.

Deep River, 1858.

REMARKS.—Our own experience in farming has not yet suggested to us what answer to make to these inquiries of our correspondent. We have long observed that turnips, generally, do not flourish well on old ground,—and the saying is quite common, that *ruta bagas* are great exhausters, and must not be applied to land twice in succession. The opinion is general, also, that crops with large leaves, such as turnips and cabbages, do not exhaust the soil so rapidly as the corn or grain crops. This is a matter which requires great accuracy of experiment in order to obtain reliable results. In order to show what different opinions prevail on these points, we give two or three extracts from the *Farmer's Guide*, a work of great research and merit.

A crop of 20 tons of turnips, and 1850 lb.= 16 cwt. 58 lb. of tops, will carry off these quantities from an acre of soil:

	By the bulbs. lb.	*By the tops.* lb.	*Total.* lb.
Potash	142.66	88.82	231.48
Soda	17·31	16·76	34.07
Magnesia	18.16	9.58	27.74
Phosphoric acid	26.77	28.80	54.57
Sulphuric acid	46 24	39.81	86.05
Chlorine	12.24	49.75	61.99
	262.38	232.52	
Gross weight to be returned to an acre			494.90

Cabbages.—A crop of cabbage 20 tons, 8 cwt. 4 lb., carries off from an acre of the soil these quantities:

Potash	105
Soda	134
Magnesia	54
Phosphoric acid	112
Sulphuric acid	192
Chlorine	52
Gross weight to be returned to an acre	699

It will be observed from these results, the much larger quantity which the green crops, potatoes, turnips, and cabbages, remove of the mineral ingredients from the soil, compared with that which the grain crops, wheat, barley, and oats, carry away—the proportion being four times as much. This is a result which observation alone would not have anticipated, because the expanded area of foliage which the green crops present to the air, would lead us to expect that their nourishment is derived more from the atmosphere than the soil; and, on the other hand, the cereal

plants, having narrow leaves, should depend more upon the resources of the soil than they seem to do. But this apparent anomaly may perhaps be explained in this manner:—The green crops weighing so very much heavier than the grain ones, from three to eight times, they ought, as a matter of course, to take a larger quantity of mineral ingredients from an acre of soil; and as all plants require to absorb a large quantity of water daily, in order to keep the saline ingredients within them in a constant state of solution, it seems necessary that the green crops should be provided with a large system of leaves, to enable them to draw, both through the roots and from the atmosphere, the large supply of water which they require to have in order to hold in constant solution the larger quantity of the saline ingredients they contain.

If this doctrine is correct, Indian corn, potatoes, wheat, rye or oats, will be suitable to follow a turnip crop. We invite some of our experienced farmers to give us their opinions on this subject.

—

A BIG BUG.

I send you an insect which I found in my door-yard this day. I do not know its name. I have shown it to a dozen or more of my neighbors, and they never saw or heard of any insect like it before. Can you tell us through the columns of the *Farmer*, or otherwise, what it is?

Ashland, July 21, 1858. A. WARFIELD.

REMARKS.—We certainly never saw anything like it before. Why, he has a pair of mandibles in his head like the hooks the ice men carry their huge cakes with. What a monster! We hope there will be only one in each State in the Union.

—

INFLUENCE OF SEX IN STOCK.

In a late number of your paper, reference is made to the opinion expressed in the Report of the Secretary of the Board of Agriculture, that "the male is of less consequence in rearing stock for dairy purposes than the female." Believing this idea to be erroneous, I was pleased to meet to-day an authority corroborative of my views. You will find it in a letter from Mr. S. W. Pomroy, of Brighton, to Mr. Quincy, Agricultural Report, vol. VI., p. 87, and seq. He says, "in the selection of bulls, most farmers confine their attention to form and color only, instead of tracing their descent from a valuable dairy stock." I remember this Mr. P. as a very sensible man, who *thought* much and *heard* but little. J. W. P.

July 22, 1858.

—

USE OF COAL TAR.

A subscriber informs us that he found coal tar, placed around his squash and cucumber vines, saved them entirely from the ravages of all kinds of bugs. Also that the smoke of coal tar will drive away rose bugs.

FINE FLEECES.

J. Smart, of Vergennes, Vt., beaten. *L. T. Herrick, Esq.*, of Milton, Vt., sheared a four-years' old buck this season, whose fleece weighed 10½ lbs. of clean washed wool; this buck was not a cosset, and has had no extra feed from the rest of his flock. He also sheared 125 ewes, whose fleeces averaged 5 lbs., and 25 of that number averaged 7 lbs. of clean washed wool, and 118 of that number had lambs. A READER.

West Milton, Vt., July, 1858.

—

SUCKERS AMONG CORN.

Is it proper or important, at any time to cut away the suckers from among corn?

If so, at what stage of its growth should it be done? EPHRAIM BARKER.

Londonderry, Vt.

REMARKS.—From what we have read and observed with regard to taking suckers from corn, we are of the opinion that *it ought not to be done at any time.*

LEACHED ASHES.

Formerly it was supposed that the process of leaching abstracted all the active virtues of wood ashes, and that, after having gone through this process, the only proper place for them was the road-side or the highway. Experience, however, has of late sufficiently demonstrated the erroneousness of this view, and many farmers who have tested the value of leached ashes as a stimulant of growing crops, as well as an alterant in physically ill-conditioned soils, are willing to purchase them at very nearly the same price which ashes formerly commanded before being leached, and convey them many miles to their farms. Millions of bushels are now used annually in the United States for agricultural purposes, and the demand increases in proportion as their value becomes known.

BLACK LAMBS.

At the farm of Chester Pike, in Cornish, N. H., we saw, a short time since, a curious freak of nature in the production of ten black lambs in a flock of seventy Spanish Merinos. The ewes were descended from sheep imported by Consul Jarvis, and had never before produced any black lambs. The buck had been used in the neighborhood for two or three years, and had (so far as Mr. Pike could ascertain) begotton no other black lambs.

We were much surprised at this, and made many inquiries concerning the circumstances attending the care and management of the sheep during the winter, but could learn nothing worthy of notice, except that the man who had charge of the flock during the fall and winter was constantly followed by a large, *black* Newfoundland dog. It would seem that the color of the lambs must be attributed to the influence of the black dog.—*Vermont Stock Journal.*

For the New England Farmer.

FLOWERS AND THEIR INFLUENCE.

A neighbor came into my garden, and looking upon a variety of flowers growing there, remarked in a reproving manner, that he had rather see that ground planted to potatoes, and it would be more profit to me, than those foolish flowers.

How common is this, or a similar remark, among a certain class of men. And what are their general characteristics? So far as my observations extend, they are unrefined, coarse in their deportment and in their intercourse with their families, and those with whom they associate. There does not seem to be a verdant spot in their hearts. They have a certain kind of affection for their families, and are attached to their associates, but it is not that high order of friendship which flows from a refined mind that has been educated to appreciate the beauties of nature. This neighbor, and kindred spirits, look upon the fields with interest, but it is in view of the prospective harvest. They have a pleasure in seeing the growth of the stalk, and the filling of the ear, that gives them bread. Such men often love a horse, or an ox, and many times exhibit great kindness, yet it is a sort of low, animal affection. It is true that men of great refinement and good taste often passionately love the noble horse, but such love for the animal is subservient to the higher order of affection which belongs to intelligent beings. This difference may be attributed to their early associations. This man did not look upon the flowers, seeing any beauty in them, nor were his senses regaled by the sweet incense that filled the air, and which should have inspired his heart with gratitude to Him, who makes the morning blush with these bright gems, which we are permitted to cultivate in our gardens and yards, and which grow wild and spontaneously upon the lawns and the hillsides, and the forests are made glad with their presence.

How powerfully do early associations for good or evil, influence our actions in future years; by them men become sordid, selfish and uncomfortable to themselves, unprofitable and disagreeable to others; or by them the better feelings of the heart are nurtured, and man becomes gentle, mild and virtuous, distilling an influence about them as the flower distils its sweet fragrance upon the breeze of the morning. As it takes mild and gentle influences to subdue the young mind, there is nothing more appropriate than the language of flowers, and the sweet melting tones of music. Are the vase of flowers and a sweet-toned instrument a part of the furniture of the sitting-room? Is a large margin of the garden set apart for flowers? Have you a fruit-yard, bearing the precious fruit in its season, that your own hands have helped to nurture, and which brings luxury to all the inmates of the family, making youth buoyant, and old age peaceful! Then, long after parents "are gathered to their fathers," brothers and sisters will love to meet at the old homestead, and tread the hallowed places, where once were the paths of youthful days.

The love of flowers, what will it not do? It elevates the man, draws out his affections, and excites modesty and humility, and all kindred virtues. It leads the mind to hold communion with Him who paints the lily's cup and gives the varied hues to every flower that breathes forth the fragrance that sweetens the air. Who does not admire that humble cottage, in a lonely place, even where poverty may at times intrude, and lay his cold and icy hand upon its inmates? yet there is cheerfulness and happiness there. The brightest evidence of this is, the modest violet and the creeping honeysuckle about the door and windows, the blooming flowers in the little garden, and the flower pot upon the window-sill. What language comes to the passer by from these evidences of refinement and taste. Our sympathies go out, unbidden, our hearts are affected, and our eyes love to linger upon such a place.

July 20, 1858. BERKSHIRE.

For the New England Farmer.

LETTER FROM A TRAVELLER.

Chester, N. H., July 28, 1858.

MY DEAR BROWN:—Not being one of your regulars, I write when the spirit moveth me, which, fortunately for you, perhaps, is not often. When at my home, in the Federal City, that spirit has a hard time of it, I guess, whenever it undertakes to move my mind in any one particular direction, for, like the compass on board an iron ship, it is so distracted by surrounding attractions, as to forget its northern affinity and roam off in all sorts of directions. But here, in this quiet and unambitious old town, the spirit can woo me to do just what it pleases, and just now it whispered, "remember the *N. E. Farmer.*" So here I am, remembering it with all my might!

"Rob Roy is on his native hills again!"

I don't know whether I ever quoted that to you before—nor do I care. I never come *here* without quoting it to myself, and what I say to one sensible man (!) I'm not ashamed to say to another; and that, somehow, has a twang to it that vibrates through my nerves, when I *am* here, just as "Auld Lang Syne" does, when I say to you, and you say to me, as we clasp *flippers*—

"And here's a hand my trusty frere,
And gi'e us a hand o' thine,
And we'll take a cup of kindness yet
For Auld Lang Syne."

I came from Exeter, here, yesterday, in company with your co-laborer, Judge French, and a pleasant ride we had, I assure you. Our talk was of farming, considerably, for you know, in the present state of the Judge's mind, he could not look on a piece of wet, sterile land without remarking "*that land wants draining,*" and when that text was hamed a sermon was sure to follow! It is, however, a melancholy fact that the farms between Exeter and Chester, with some worthy exceptions, might be improved not only by draining, but in many other particulars. "Those oats," said the Judge, as we passed a field that seemed to be endeavoring to strangle a very slim crop of that vegetable, "look exactly as I knew they would when I saw the man harrowing them in, up to his ankles in mud." We saw men mowing with scythes, and raking with hand-rakes, and concluded that the spirit of improvement had not yet sounded its trumpet in their ears, and that they did not take the *New England Farmer!* On the other hand we saw mowers *clipping* it

through the tall grass in grand style, and horse-rakes gathering it up for the garner, on some of the farms that appeared as if they were cultivated by *live people*. The corn crop generally, looked very promising, the hay crop not so good, and the recent rains, which have fallen in rather too much abundance, have sadly interfered with the gathering in of the latter—though, thanks to the invention of hay-caps, the crop is not very badly injured. By the way, we saw many a field, during our early ride, dotted all over with that useful contrivance, appearing like the grand encampment of an army of Liliputians, and in one field where the caps probably *ran out*, the owner of the hay had substituted old quilts, coverlids, horse-blankets and even buffalo robes! That man deserves to save his hay, and I trust his cattle will luxuriate next winter in sweet fodder, while he is comfortably sleeping under those same unique hay-caps!

This town of Chester is, as you know, dignified by a long road through its principal village, called "Chester Street." I do not believe there is, in the United States, such a half-mile of trees as that street presents to my eye at this moment, as I sit here in the old paternal mansion, where you and I have passed so many happy hours, in the days long gone by! One side of the street presents a continuous row of maples and elms, now of nearly, or quite 30 year's growth, in full foliage, and, as I view them obliquely, showing a half-mile of *solid green*. This row was mostly planted by an assistant editor of the *New England Farmer*, in his boyhood! Towering far above this growth, for a portion of the distance, is another, about 10 feet inside of it, forming an avenue—and it was planted by that same gentleman's great grandfather, about a hundred years ago. It is principally of ash. There is, however, one large elm; and as I have been travelling round with a tape line in my pocket, ever since I read the last production of "The Autocrat of the Breakfast Table," in the August number of the *Atlantic Monthly*, I measured that elm of a hundred years. Near the ground it is 12 feet in circumference—5 feet from the ground, 11 feet 4 inches—the diametrical spread of its foliage is 90 feet, and some of its limbs would make large trees. Mr. "Autocrat" says—"What makes a first-class elm? Why, size in the first place and chiefly. Anything over 20 feet of clear girth, 5 feet above the ground, and with a spread of branches a hundred feet across, may claim that title, according to my scale." So our Chester elm is still in its youth! Well, I knew that tree more than fifty years ago! and it now seems to me as if it was just about the size then, that it is now. *Small as it is*, according to our Autocrat's scale, it is an elegant and majestic tree, one of the most perfectly shaped and well-proportioned elms I have ever seen, and so sound and vigorous as to promise to come up to our friend's scale in about a hundred years more! I hope his grandchildren may have the pleasure of putting his "ring" upon it! I read that production of the Autocrat, for the first time, at Exeter, where there is an elm that the benighted people of that town have always looked upon as a monster tree. One hour after I read it, I had a tape line round that tree, at 5 feet above the root, and lo, it annouced the humiliating fact that it measured 14 feet 4 inches! I wound up the tape line mighty quick, and sneaked off as if I had been caught measuring a stalk of *tall corn*, and found it 3 feet high! Nothing takes the conceit out of large things like a measuring tape!

But, to come back to Chester Street, where I am, and where I wish I could say to you, "Simon, look down that glorious avenue; did you ever see anything more beautiful, or more silent and deserted?" Poor old Chester, where you and I played in our boyhood, loved in our days of goslinship, married in our young manhood, spent some of the best days of our lives, and look upon, even now, with reverence and deep affection! Although it is shorn of its fair proportions, first of Manchester, before we were born, and, since our remembrance, of Hookset and Auburn, it is still, to us, a green and sunny spot, and never more green or more sunny than on this beautiful July afternoon.

I have just been across the street into the old garden, picking cherries from the grand-child-trees, I should think, of those from which I picked them in my boyhood. But there stand the old St. Michael pear trees which I saw planted, and in the stocks of which plants I saw with my boy-eyes, my father set the scions when they (the stocks) were, perhaps an inch and a half in diameter. Those trees are lusty fellows now, but there is the ring around them where the new scion united itself to the stock—married for richer or for poorer, for better or for worse—no divorce from that wedlock, and even death cannot them separate! The marriage ring remains a sacred tie to them forever! Would it were always as sacred!

But I am getting garrulous in my old age, and my *brief* letter is passing the boundaries of your patience, I fear. I am no farmer, as the Judge is, and therefore you must not expect me to tell you how to plant mangel wurzel, lay drains, make wire fences, prune trees, and all that sort of thing, as he does, and I must be suffered to run on in my own way, and write of what happens to come uppermost in my mind.

It is my candid opinion that I have written enough for this time, and so I subscribe myself your own and the *New England Farmer's* very humble servant,

B. B. FRENCH.

REMARKS.—A capital letter, Major—squeeze your sponge again, by-and-bye. We are glad that all persons are not farmers; if they were, we should lose many beautiful shades and tints that we enjoy as it is.

The Judge presents us with a class of objects and opinions widely different from yours, and so on through our whole list of excellent correspondents. It is thus that we are enabled to serve up a Weekly dish, so rich and well seasoned, as to furnish something agreeable and profitable to every taste.

TEETHING IN HORSES.—The *American Veterinary Journal* for June says:—"There is no doubt that many young colts suffer as much pain in cutting their teeth as is the case with children; and the pain does not always arise, as some

persons suppose, from irritation of the mucus membrane of the mouth, occasioned by the point of the tooth, but frequently from the pressure on, and irritation of, the dental nerve. The remedy, (instead of tormenting the suffering creature with a red hot iron for the purpose of 'burning out the lampas,' as some persons profess to do,) is a common thumb lancet. Make an incision through the *gum* or mucous membrane of the mouth, in the region of the tusks or incisors, wherever the difficulty may be, and relief is almost immediate. This is a sure remedy to relieve local distension of the mucous membrane of the mouth, if it exist, and at the same time prevents the fang of the tooth from irritating the dental nerve."

LETTER FROM MR. BROWN.

Rochester, Mass., Aug. 7, 1858.

DEAR SIR:—This was formerly one of the large towns of Massachusetts, in territory, but has recently been reduced in dimensions, by clipping from its borders, and erecting two other towns, *Marion* and *Mattapoisett*. The latter town lies directly upon an arm of Buzzard's Bay, and in seasons of greater commercial prosperity, had quite a lively business in ship-building, which was of considerable importance to the people, in the absence of manufactures, which, in one form or another, may be found in almost every section of our State. The herring fishery of Mattapoisett, and the lumbering of Rochester, give a little variety to the occupation of the people, and are each a source of considerable income.

All this section of Plymouth county is quite flat, and a large portion of the land is rather uninviting to agricultural pursuits; some of the land is sandy, evidently once covered with a growth of pines, while large tracts are thickly studded with granite boulders, and a plenty of small stones to keep them company. Although farming is the principal occupation of the people, it is obvious that it has not been looked upon as a pursuit demanding study and investigation, and one requiring considerable *head-work* as well as hand-work. The great obstacle to progress here, seems to me to be, *the possession of too much land*. On inquiry of one farmer how much land he owned, he replied *four hundred acres*, and added, that his grand-father divided it between four sons, but he had managed to get it all together again! This desire amounted to a passion with him, and although now nearly eighty years old, he will not consent to the sale of a single rood. Yet on this 400 acre farm, I saw no evidence of an income equal to what I frequently find on a 40 acre farm under good cultivation,—as less than a dozen head of cattle are wintered on it, and the amount of stock kept, as a general rule, is the criterion by which I usually judge of a farm. If three-fourths of the outlands of this farm were sold at a moderate price, and the proceeds well employed on the remaining fourth, there can be no doubt that the profits of the farm would be trebled, and a new aspect given to everything about the ancient homestead.

On such lands as compose many of these farms it is a pity that farming was ever resorted to as a source of supply. The labor of clearing them of the rocks and stones is immense, and even when that is accomplished, they are too flat for most of the hoed crops, and in seasons like the present poorly reward the care and toil bestowed upon them. But directly or indirectly, good seems to come out of everything. These stern realities which meet the people at every step, have excited a good deal of activity of mind in other directions, if not in that of farming. The extensive *forests* that prevail, have suggested many curious devices in the way of circular and other saws, turning lathes, and boring and planing machines, to convert them into a thousand articles of ornament or utility,—while the rocks which have impeded the plow and obstructed the scythe for generations, could scarcely fail to stimulate some minds to devise the means of getting them out of the way; and this has been most signally accomplished in

A MACHINE FOR LIFTING ROCKS.

I was invited to the farm of THOMAS ELLIS, Esq., of this town, to see this machine in operation, and a simple account of *what I saw it do*, will be better evidence of its value than any glowing description or high-sounding phrases. It is necessary, however, first to state that the rocks *do not require any digging about*, unless they are entirely below the surface, and then only enough to make room to apply the hooks by which they are raised; a slight indentation is made on two faces of the rock with a common drill, into which the points of the hooks are placed. The machine is a simple, stout framework, upon which is a little cast-iron gearing, and the whole mounted upon strong wheels six feet in diameter. Two men and a boy with a pair of oxen and a horse, or two pairs of oxen, if the rocks are very large, are all that is required to work it, and there is no hard lifting, no chocking of wheels, no prying with bars or levers, no vexation or swearing necessary in the most effectual operation of the machine.

At 9 o'clock, it was backed over a rock showing only 3 inches out of the ground, and in 5 minutes the rock was upon the surface, in the cheerful sunlight, whose warm rays it had probably never felt so plainly before. It was then taken to another, the hooks applied, and in 6 minutes it was upon the surface. The weight of this

rock was computed to be *five* tons. Passing to another, which, upon raising, was found to be half out of the ground, it was laid up high and dry in *four minutes!* and this was all the time occupied in applying the hooks, taking out the rock, and dropping it loose upon the top of the ground! The next one occupied ten minutes. This I measured, rule in hand, and allowing 12 cubic feet for a ton, which I think was enough for the kind of rock lifted, I found it to weigh *six tons!* In one hour, 26 rocks were lifted out, varying in weight from 300 lbs. to six tons! and at the end of two hours, 45 rocks had been exhumed from their natal beds, to the glorious sunlight, which, as a great favor, shone out with resplendent brightness on this occasion.

I am clearly of the opinion that I have never seen any machine whose use would prove more profitable on rocky farms than this. I think I am competent to judge in this matter, as I spent much of my youth, and several years more recently, in reclaiming lands from the possession of rocks to the use of the plow and hoe and cultivated crops. In accomplishing the work I have described, *there was no hard labor for the men or the team;* every thing was quickly and quietly done, and apparently, without unusual effort on the part of any engaged in it. The only strain was occasionally upon a noble pair of oxen in removing some of the largest rocks a few feet from their old home; but they did it with an energy and precision that gave evidence of excellent training. Their owner held a "goad-stick" in his hand, but guided them mainly with his cheerful words.

At the expiration of two hours, the operators selected the largest rocks they had raised, and laid them in a line for a wall, and when two or three were in place, others, smaller, were laid upon them with rapidity and ease, the men having scarcely any part in the matter beyond hitching and unhitching the hooks.

This is the machine to precede the mower and horse-rake, on great numbers of our rocky New England farms, and facilitate their culture and increase their crops and profits. Those who use it, dig deep trenches where it is intended to lay a wall, trenching sometimes four or five feet deep, or as long as the digging is easy; then fill the trenches with the lesser rocks and small stones and use the earth thrown out to fill the holes left in the field. The machine weighs 2500 lbs., but standing upon wheels so large, is easily transported over the roads or fields. It is compact, wonderfully strong, has nothing liable to get out of repair or break, but a chain, and costs $275. I was sufficiently interested in it to induce me to borrow a model, which may be seen at the *Farmer* office after my return. Several persons who looked upon the operations of this machine with me, estimated that it would take two men, such as are now commonly employed upon New England farms, and two pairs of oxen *four days*, to do what the machine did in two hours. I think they were correct. Those who are interested may learn more about this Lifter by addressing THOMAS ELLIS, Esq., Rochester, Mass.

Mr. SOLOMON E. BOLLES, the inventor of the machine, informed me, that, though not intended for that purpose, yet it could be successfully operated in pulling common stumps.

The crops in all this region look finely—corn especially. The hay crop is not all gathered yet, as the frequent rains have prevented drying it. Much is now standing in cock, and in the flat country, not a little partly under water, while nearly all the fresh meadows remain uncut. A great deal of hay and considerable grain must inevitably be damaged.

I have been gratified to see several plantations of the white pine, of various heights, and appearing to be in a very flourishing condition. The pine loves this soil, and I should think the best use to which it could be devoted would be to sow it with the seeds of that tree. On one plantation which I saw the trees were about ten feet high, with an exceedingly lively foliage, and had retained their branches quite close to the ground. They certainly promise a very rapid growth.

I am indebted to Mr. Ellis for the cheerful faces of his household, for excellent bed and board, and for a charming early morning ride of five miles to the station, in a cosy carriage, with his agreeable and intelligent daughter. "It is a very pleasant world we live in"—*sometimes*, very. That is all, excepting that

I am very truly yours,

SIMON BROWN.

Joel Nourse, Esq., Boston.

For the New England Farmer.

MOWING MACHINES.

NOTES BY THE WAY.

Yesterday I was invited to witness the operations of Allen's mower, guided by Mr. Merrill, on land of Mr. Cabot. He cut before twelve o'clock, five acres, yielding at least ten tons, with no assistant near. I saw the same machine at work, to-day, on the ground of Dr. Loring, in company with Danforth's improved grass cutter, guided by Mr. Thompson, of Greenfield. Both of these implements did their work so well, that it was not easy to say which did the best. If I were to guide, I should prefer Allen's, because on this I could ride at my ease; whereas, he who guides Danforth's machine, has to tag behind.

Both these fields were calculated severely to test the powers of the implements. On the first, was spread in the spring a full dressing of ma-

cle bed, so that the shells were constantly in the way of the edge of the knives. The latter was extremely uneven, having a clayey soil, and imperfectly laid down.

I mention these facts, to rebut the idea, that mowers will operate only on even land; they will operate on any ground, when well harnessed, and skilfully drawn, but best on ground free of obstructions. ESSEX.

July 30, 1858.

For the New England Farmer.

THE SEASON.

Never have I known a more luxuriant vegetable growth in our fields. Corn, the prime hope of the farmer, is all that could be asked for it; notwithstanding its early start was slow and unpromising. Grass is sufficiently abundant, though quite a large proportion of the crop remains uncut; and much that has been cut has been injured by the superabundant rains. Much interest has been awakened by the use of machines moved by horse-power, in the cutting and curing of hay, and several new and improved patterns of implements have been introduced to our fields; while the defects of those heretofore used have been noticed and corrected. This is certain, that implements of this character are destined to general use, on all fields of sufficient extent to warrant the expense of procuring them; the particular kind to be preferred, must depend upon many contingent circumstances. Skill in the design, skill in the construction, skill in the use, are all essential to perfect work. I should as soon think of being easily shaved with a dull razor, as of having my grass well cut with a machine out of order. I perceive that some of the editorial craft of your city are untiring in their suggestions to discountenance the use of machinery in the labors of the farm. This may do very well for gentlemen of the old school; but Young America will not work long in such a harness. Her motto is, "Best first, best always."

Much less injury is experienced from the operations of insects than was expected last year. I have never seen the onion fields more luxuriant and promising; and you know this crop is the main stay of many of our most industrious cultivators. AGRICOLA.

Essex Co., July 31, 1858.

HORSE POISONED BY FUMES OF LEAD.

MR. EDITOR:—A few days since, a horse belonging to a friend, while trotting moderately along, suddenly commenced to tremble and became unmanageable—after running a short distance he fell. Being driven by the lady and son of the owner, and happening to be near at the time, I was requested to assist them. I found him upon his feet, very weak, trembling, and covered with a copious perspiration; after bleeding and walking around about one hour, he recovered, and drove home, (about three miles) apparently as well as ever, although some weak. The horse was one known to be perfectly sound, and neither having been over fed or over driven, the owner was quite anxious to ascertain the cause of the "fit." The mystery was, however, solved in my own mind after entering his stable.

The owner was engaged in painting and repairing his house, and deposited in the stable, (which was quite small and poorly ventilated,) a number of pots of lead paint, mixed in various forms—but thought it was impossible that the animal, could have got at them. Now, here is what strikes me to be a very well marked case of "Lead Colic" in the horse. The most distinguished veterinary surgeons of the day have clearly demonstrated the susceptibility of animals to the poisonous action of lead—and not unfrequently we see cows, in particular, lose their lives from licking newly painted fences, &c. Although the horse might not have come in direct contact with the poison, why should not the horse suffer the same deleterious effect from breathing the air of a close stable impregnated with carbonate of lead, as a human being sleeping in a newly painted apartment? HENRY B. C. GREENE, M. D.

Saco, Me., June 2, 1858.

NOTE.—We see no reason why a horse should not be poisoned by breathing the fumes of lead as well as a man. We know of many cases where persons were attacked by colic, and rendered diseased for years, by sleeping in rooms painted with lead, before they were perfectly dry, and many a poor painter has found "death in the pot" of paint which he used in his business.

Maine Farmer.

For the New England Farmer.

RENT OF LAND IN ENGLAND.

MR. EDITOR:—In an editorial of the 24th you speak of the rents of the "cultivated lands in England and Ireland," as averaging from twenty to twenty-five dollars per acre. From the other portions of your article, I suppose you mean, by the expression "cultivated land," that used for pasturage and for hay, as well as that which is plowed.

As your estimate is much higher than I supposed the average rental of farms to be in England and Ireland, I have rather hastily looked over the series of articles on "The Rural Economy of the British Isles," published in your columns in 1856, and have copied every direct statement there made of the amount of rent in the various counties, that fell under my notice. I think it must be interesting to American farmers, who generally own their land, to know how much the farmers of England can afford to pay as rent, for their farms. I have made my extracts as brief as possible, supposing that those who have the monthly *Farmer* for 1856, and who feel any interest in the subject, will turn to the page, which is indicated in each case, and read the statement in its connection. And if my references should provoke any one who has not the volume, to purchase a copy and read nothing but those eighteen articles, I have no fear that he will accuse me of leading him into a poor speculation.

Middlesex—the metropolis county,—rents average $10 per acre. (Monthly *Farmer*, 1856, p. 252.)

Norfolk—A sandy plain of 750,000 acres, averages $6,25 per acre, net production, (not rent) which in 1780 produced scarcely $1,25 per acre. (p. 259.)

Lincolnshire—The "Fens" rent for $7,50; the "Wolds," $6,25. (p. 260.)

Somerset—$7,50 to $15,00, and even $22,50 in the "Vale." (p. 276.)

Gloucester — The "Cotswold," $4,00; the "Vale," $7,00. (p. 276.)

Chester—Grass lands, $7,50. (p. 276.)

Lancashire—Average, $7,50; near Liverpool and Manchester, arable land lets at $20,00. (p. 322.)

In Scotland, the "Lothians," which surround Edinburgh, average about $5,00, while some irrigated meadows rent as high as $150,00 to $200,00 per annum, per acre! (p. 361.)

I know nothing about the authority for these statements. But many of your readers, probably, besides myself, would like to know what rents our brother farmers do pay in old England.

In this connection, I cannot refrain from copying from the articles alluded to, a single statement as to the amount of capital required by those who hire land in England. The writer says:

"The English farmer, before 1848, held, that to conduct a farm, he must have a capital of $40 to the acre, and now he thinks $80 to the acre not too much." (p. 178.)

To hire a farm of one hundred acres, then, the poor tenant must have a capital of eight thousand dollars! Verily, one-half of the world don't know how the other lives. S. F.

Winchester, July, 1858.

AGRICULTURAL EXHIBITIONS—1858.

STATE FAIRS.

Alabama	Montgomery, Oct. 18—22.
California	Marysville, Aug. 23—26.
Connecticut	Hartford, Oct. 12—15.
Illinois	Centralia, Sept. 14—17.
Indiana	Indianapolis, Oct. 4—9.
Iowa	Oscaloosa, Sept. 28—Oct. 1.
Kentucky	Louisville, Sept. 28—Oct. 2.
Maine	Augusta, Sept. 21—24.
New Hampshire	Dover, Oct. 6—8.
New Jersey	Trenton, Sept. 14—17.
New York	Syracuse, Oct, 5—8.
North Carolina	Raleigh, Nov. 2—6.
North-Western Virginia	Wheeling Island, Sept. 14—16.
Ohio	Sandusky, Sept. 14—17.
Pennsylvania	Pittsburg, Sept. 28—Oct. 1.
Rhode Island	Providence, Sept. 14—18.
South Carolina	Columbia, Nov. 9—12.
Vermont	Burlington, Sept. 14—17.
Wisconsin	Madison, Oct. 4—8.

COUNTY SHOWS.

Essex	Danvers, Sept. 29 and 30.
Middlesex	Concord, Sept. 29.
Middlesex, North	Lowell, Sept. 15, 16 and 17.
Middlesex, South	Framingham, Sept. 21 and 22.
Worcester	Worcester, Oct. 6 and 7.
Worcester, West	Barre, Sept. 30.
Worcester, North	Fitchburg, Sept. 24.
Worcester, South	Sturbridge, Sept. 29
Hampshire, Frank. and Hamp.	Northampton, Oct. 13 and 14.
Hampshire	Amherst, Oct. 12 and 13.
Hampden	Springfield, Sept. 28, 29 and 30.
Hampden, East	Palmer, Oct. 5 and 6.
Franklin	Greenfield, Oct. 6 and 7.
Berkshire	Pittsfield, Oct. 6, 7 and 8.
Housatonic	Great Barrington, Sept. 22, 23 and 24.
Norfolk	Dedham, Sept. 28 and 29.
Bristol	Taunton, Sept. 23 and 23.
Plymouth	Bridgewater, Sept. 29 and 30.
Barnstable	Barnstable, Oct. 6 and 7.
Nantucket	Nantucket, Oct. 13 and 14

MISCELLANEOUS.

American Pomological Society	New York, Sept. 14.
National Horse Show	Springfield, Mass., Sept. 14—17.
St. Louis Ag. Mech. Association	St. Louis, Sept. 6—11.
United States Agricultural Society	Richmond, Va., Oct. 25—30.

For the New England Farmer.

WIRE FENCES.

July 26, 1858.

Hon. H. F. French:—*My Dear Friend*—Can you spare a few moments from authorship and court—ship I was about to say, but I have no authority for that, to give me some brief directions about making a wire fence?

I know what the books say, but I prefer your experience.

I wish to make a fence between my lawn and pasture, running it along on the northerly side of my pine grove.

The size of the wire, the number of the lengths, the distance and size of posts, the manner of stretching the wire, whether the trees can be used, and if so, how? These are the points of inquiry that occur to me.

Most truly, your Friend, W. C. C.

Exeter, N. H., July 29, 1858.

My Dear Sir:—Of course when you are so wise as to prefer my experience to what the books say about wire fences, I can find time to write you, though *I* have nothing against books, myself!

On the 14th day of August, 1852, I put up 70 rods of wire fence between my cow pasture and field, through the woods, using the trees for posts, occasionally cutting a stake and driving where more than 8 feet space remained between the trees, to which the wires are attached. I used number 9 wire, annealed, and but 3 wires, the highest 4 feet from the ground, and the spaces 10 inches, leaving a wide space at the bottom, of course. I attached the wires to the trees, partly with small staples made of the same wire, by myself, and partly by sawing notches into the trees and driving nails over the wires. I run crooked wherever a tree came near. Four of us put up the 70 rods in one day. The cows have looked through it each summer, with approbation at my corn-fields, but no animal has ever broken through it, and no repairs have been made upon it. The cost was,

189 pounds annealed iron wire at 6½ cents	$12,27
Labor putting up	4,00
Nails	25
Total	$16,52

being about 23½ cents per rod.

As the fence was designed to be, and is, invisible, at a few rods distance, I cared nothing about its being straight.

So much for experience, and now for a little theory, which is based on some more practice, and the wise observations of a large fraction of a century.

To build a good fence against cattle? I should use number 9 wire, *not* annealed, because it is said to be stronger. The telegraph companies, I am told, sometimes use galvanized wire which does not rust, but that is too expensive. I should

use 5 wires, so that the cattle need not be so much tempted to thrust their heads between, and so that calves and "such small deer" need not get through.

The tension of the wires makes the whole strength of the fence, and to get them straight, and keep them so—"Ay, there's the rub." No matter how far you want to go on one course, if the ground is level, stretch the wires the whole distance. A tree at each end is the best post. Indeed, it is almost impossible to set a stone or a wooden post, that will not yield to the constant strain the first spring. If you set posts, set them very deep, and brace them with strong timbers resting against short posts set for the purpose.

The best implement with which to strain the wires, is a little thing which you can make in ten minutes, in this way. It was invented, I think, by Hon. Simon Brown, of the *N. E. Farmer*. Take a stick of round hard wood, about 4 inches in diameter, and 16 inches long. With a two-inch auger, bore two holes through it, at right angles with each other; one near each end. Bore another small hole, say ¼ inch through the middle, large enough to pass the wire through conveniently. Make 2 handspikes, say 2 feet long, to fit the auger holes. Having secured the wire at one end, *unroll* it by trundling the coil along on the ground, so as not to get any kinks in it, which you are sure to do in any other way, until you reach the other end.

Bore a hole, say ½ inch or inch through the tree or post, and pass the wire through, leaving 3 or 4 feet spare length. Pass the wire through the small hole in your *windlass*, and wind it round once or twice so that it will not slip; then put in the handspikes, and you can strain it until it will "like an angel sing," or perhaps the sound will be more like a fiddle-string than the music of the spheres. You can thus apply more power than 4 horses, and can hold the strain steadily. Then drive a hard wood plug into the hole through the tree or post, on the outside. This will hold the wire, till you take off your windlass, and bind the wire a few times round the projecting end of the pin.

At 8 feet distance along the wires, drive small stakes for the purpose of keeping the wires at their proper distance apart, so that cattle cannot pass between them. With a short, stiff saw cut notches slanting downwards into the stakes, to receive the wires, and confine them by nails. A single clapboard nail driven *upward* across the wire will hold it. The whole strength of the fence depends on the end posts, and the tension of the wire, as I have said. After cattle have got acquainted with wires, they are very discreet about attempting to pass them.

One thing more. Splice the wires as the telegraph men do theirs, which you can learn by looking at them. They never loop their wires, because they will break at the loop if thus connected, but they lay the ends together, lapping them a few inches, and then bind them round with a short turn three or four times.

My land here is *clay*, and posts will not stand. Last spring I set a row of white pines between my pasture and field, 8 feet apart, fifty rods. To these I intend when they have grown a few years, to attach wires for a fence. Of course it does not do a tree much good to bore holes through it and drive nails into it, but I have several pine and oak trees not more than 6 inches in diameter, through which I made ½ inch and inch holes in 1852, three in a tree, and tortured them with my "infernal machine," and they seem to thrive none the less.

If I wanted to deal gently with the intermediate trees I should drive in irons several inches long, with holes at the ends, leaving them to project so as to keep the wires off the tree sufficiently to allow for its growth. A wire resting against the side of a tree will injure it more than if it passed through the centre, because it will cut it as the tree grows. I tried driving large spikes into my end trees, to hold the wires, but found the wires injured the trees more in this way than when put through the middle of them. If you ever saw a sugar orchard, you have observed that trees, like the "rest of mankind," may be *bored* a good deal and not die, however much they may suffer. Lest I bore you too much, I will desist, and send this by way of the *New England Farmer*, for "the greatest good of the greatest number." Yours truly, H. F. FRENCH.

EFFECTS OF THE SUN'S LIGHT ON VEGETATION.

The Ohio *Valley Farmer* publishes the following. The observations detailed were furnished by Isaac N. Woodward, of Montezuma, Indiana.

It is a well conceded fact, that the sun's light has a powerful effect upon both animals and plants, and that a certain portion of it is necessary to their growth and proper development. The different colors of vegetation, also, are attributable, to a certain extent, to the sun's light; this may be proven by noticing vegetables that have flowers, which grow in the shade, and comparing them with those that grow in the sunshine. We will find there is quite a difference in the growth and color. I have noticed that potatoes and other vines, which happen to come up in cellars, always direct their course to that portion of the cellar from which the most light emanates. But I have more particularly observed its effects on fruit trees. I find it is generally the case that those apples which grow in the tops o the trees, where they are freely exposed to the sun's light, are larger, of a brighter color, and have a richer flavor than those which grow on the under limbs or in the shade. And I believe, if

fruit-growers would pay proper attention to pruning, so as to admit the light freely among the branches, they would both improve the quality and increase the quantity of their fruit.

For the New England Farmer.

FOOD AND DRINK PHYSIOLOGICALLY CONSIDERED.

MESSRS. EDITORS:—The writer in *Blackwood's Magazine*, from whom you have recently made extracts, is as interesting as he is bold and assuming. Many of his views demand the most serious attention, especially of that class of persons for whom they seem to have been specially intended. Nevertheless, in his zeal to establish the physiological theory of diet, which I admit to be essentially correct, and to demolish the chemical theory, I believe he has gone a little too far, as I shall endeavor to show.

Admit that water is food, and "on the whole, more nutritious than roast beef," a doctrine which, in its essentials has been long taught, and that "each individual organism is specifically different from every other;" still it does thence *follow* that "common salt" is "as much an edible as the white of an egg," nor that "whatever we find in the organism is a constant and integral element, either forming a part of its structure, or one of the conditions of vital processes," alone "deserves the name of aliment." The former, *with some qualifications*, we admit; the latter, *without* qualification, we deny.

In regard to the former, I will only say that what are here called specific differences of organization, requiring different forms of aliment, are, for aught which appears, abnormal conditions or differences; and that all the cases which the writer in *Blackwood* has set down in proof of his doctrine, are in all probability only such exceptions as serve to prove the general rule that in a normal state of the system what is meat for one, in the human race as a race, as well as any of the omnivorous races below man, is meat for another, and *not* poison. The name idiosyncrasy will as well describe them as any other. That writer knows as well as I, that these specific differences, in any considerable degree, cannot be found in the infant at the breast, and that they are less frequent, in proportion to our approximation to that stage of existence, and more so as we advance into life, and become exposed to its artificials and combinations.

If salt were as much an edible as the white of an egg, if in other words it were an essential aliment—what would become of the nations and tribes and individuals that never use it? The Camanches Indians never use it. The same is true of other tribes. One whole world, that before the flood, probably never used it. Was Methuselah's life shortened, or was his health deteriorated by the want of salt, as an aliment? I know of a few individuals who seldom use salt, never when they can possibly avoid it, yet none are more healthy than they appear to be. Can the old, hackneyed stories about the terrible consequences that have followed from the exclusion of salt from human diet, or any new theories, long stand against such facts as these?

But again, if the physiological fact that muriate of soda is found in an organism was proof positive that we ought to make it an aliment, what shall we say of the fact that the same elementary principle is found in our cattle and sheep, indeed in all our herbivorous animals? Does this alone prove that they need salt? The finest cattle in Hindostan are said to be found among the Himmaleh mountains, where salt is never found, nor does it appear that they are deteriorating.

Moreover, if the fact that mineral substances, such as salt, sulphur and iron, are found to be a part of the organism, proves that we ought to eat them, should not iron, in small quantities, at least some of its oxides, be considered indispensable as edibles, no less than salt, or the white of an egg? Yet of the *one hundred persons*, more or fewer, whose blood, according to Dr. Good, contains iron enough to make a plowshare, how many ever ate iron in their whole lives?

It will not, surely, be said, by way of reply, that we take into our bodies such elementary substances as when recombined make iron, salts, &c, for that would be but yielding the whole argument, since it is most certain that if nature has the power of recombining to form one new compound, she may have to form any other. Such, at least would be the fact with regard to all things which, according to the laws of animal hemistry are susceptible of recombination, or c in other words, contain the needful elements or bases.

It is not proved of all the inhabitants of the South Sea Islands, that those who had no salt, cooked their flesh in sea water. Nor is it better proved that the wild herbaceous animals in America or Africa who frequent the salt licks go there for the sake of the salt, even though they should use it after they get there. We are by no means sure that they are not more eager, much more so, after the tender grass which shoots up so early about these licks. In either case they would become an easy prey, while there, to their enemies.

Let me not be understood as opposing the physiological theory of the writer in *Blackwood*. On the contrary, we endorse him mainly, and only regret that any part of his excellent remarks should be open to criticism. Truth gains nothing in the end by misrepresentation, even when unintentional. W. A. ALCOTT.

Aburndale, 1858.

RE-SHINGLING OLD ROOFS.

Mr. J. T. Adams, in the *National Era*, gives the following directions:

"Whenever a roof begins to leak, and you wish to re-shingle it, do not take off the old shingles—put the new shingles on the top of the old ones—but make use of six-penny nails in place of four-penny or shingle nails. The advantage of this method will consist in the following particulars:

"1. You will save the expense of removing the shingles.

"2. The building will not be exposed to wet in case of rain, before it is finished.

"3. The roof will be much warmer and tighter.

"4. Neither snow nor rain can beat under the butts of the shingles by heavy winds.

"5. The roof will last full one-third longer.

"I have tried this plan, and find it has these

advantages. It takes no more shingles, no more nails in number—only a little longer—and no more time to put them on, and, if done in a workmanlike manner, will look as well as if shingled. But it should be done before the old shingles are too much decayed. All the moss (if any) should be removed, or swept off with a stiff broom, before putting on the new shingles."

REMARKS.—Can this be so? Will some of our readers acquainted with these matters, write upon them?

EXTRACTS AND REPLIES.

FOWL MEADOW GRASS.

DEAR SIR:—Having received your interesting paper of the 26th inst., I beg to state that your contributor, Mr. Wetherell, has fallen into some mistake in stating that *Poa serotina* is not an American grass. It has been recognized as an indigenous grass ever since Muhlenburg's days at least, in 1817, and is equally common with *Poa nervata*. Unless Mr. Wetherell means to imply that what botanists so denominate is not the same species as the European grass of that name, I cannot well account for his taking the view he does in this respect. As to which of the two grasses to which the popular name of "Fowl Meadow Grass" has been applied, may rightfully claim that name, that is a historical question, about which I have no information to offer.

Very respectfully yours

Cambridge, June, 1858. ASA GRAY.

NOTE,—This communication was mislaid or it would have been published at an earlier day. Mr. Wetherell's article discussed the value of the two grasses, and the title each has to the name of Fowl Meadow. He speaks of *Poa serotina* as a German grass, perhaps to distinguish it more particularly from *Poa nervata*, which is indigenous only to America. That the former is a native of both continents is an admitted fact, and it is a valuable addition to our indigenous grasses.

CURRANTS—MOSSY LANDS—SCOURING IN CALVES—WOOD STRAWBERRY—ONE-HORSE MOWER.

When is the best time to set out currant bushes? and how near should they be set?

What fertilizer is the best adapted to mossy lands?

What will stop a calf from "scouring?"

Where can plants of the "wood strawberry" be obtained?

Which is the best "one-horse mower?"

Will you please answer these queries through the *Farmer* and oblige INEXPERIENCE.

Charlemont, Mass., 1858.

REMARKS.—Set currant bushes in the spring, at least four feet apart.

The best fertilizer for mossy lands is a good plow and plenty of barn manure.

A dry warm shelter, dry food, and proper attendance in every way, will stop "scouring" in calves.

We cannot inform you where plants of the "Wood Strawberry" can be obtained, though they have been quite common in New England. Nor can we inform you which is the best one-horse mower, because there are several which we have not used. By next year's haying time we expect to see a better one than has been made yet.

THE PLOW AND THE SPADE.

Is it better to use the spade than the plow in a garden, provided there is time to do either? While watching a neighbor spading his garden patch and picking out the stones, the thought occurred to me—would those stones ever be any larger, should they remain buried there for years? I asked him for his opinion, and he replied, "they would; they grow like anything else." I thought not; how is it, say you?

EDMUND H. BENSON.

REMARKS.—Use the spade by all means, under such circumstances. We are inclined to think the stones will decrease, as they gradually impart their constituent particles to the soil, such as potash, lime, &c.

WHAT IS THE PROSPECT OF THE HOP TRADE?

I wish to know your opinion with regard to the hop market for the coming two or three years. Had hop raisers better continue in the business, or had they better plow up their fields, and plant and sow something that will pay them for their labor every year? I have put my hand to the plow for raising a small field of hops every year; this is the third year and haven't received a penny yet; unless you can speak favorably, I believe I shall look back. L. C. POWERS.

Ripton, Vt., 1858.

REMARKS.—Will those acquainted with the business discuss it with Mr. Powers.

AGRICULTURAL ADDRESS.

Will you, through your paper, which is very generally taken by the farmers in this vicinity, communicate the fact, that the Hon. George S. Davis, of Greenfield, has consented to deliver the address before the agricultural society in the town of Warwick, October 13, 1858. The public are invited to attend; and all the farmers in the neighboring towns are respectfully invited to enter the list of competitors for the premiums at the cattle show which is to take place on that day. JOHN GOLDSBURY.

Warwick, July 29, 1858.

BLACK POLAND TOP-KNOT FOWLS.

These fowls may be procured of C. E. French, of Braintree, Mass., or of N. P. Rines, Concord, N. H.

HALL'S STUMP PULLER.

"A FARMER," of Sparta, Tenn., will learn all he wants to know about this machine, by addressing Messrs Nourse & Co., Boston, who are Mr. Hall's Agents.

THE ART OF TAMING HORSES.

The London *Illustrated Times* is publishing articles, by Rarey, the horse-tamer, in elucidation of his theory. His method and principles are substantially those which, a few weeks ago, we hinted they were most likely to be. He lays down three cardinal facts, in relation to the horse, on which he erects his theory. The first is that the horse is so constituted by nature, that he will not offer resistance to any demand made of him which he fully comprehends, if made in a way consistent with the laws of nature. In proof of this he refers to the want of reason in the horse, which prevents that animal from resisting the impositions constantly practised upon him. The horse is so much stronger than man, that, if he possessed the logical faculties, and was able, therefore, to realize his advantages in a contest with man, he would not submit to be driven, or ridden, but would successfuly demand to be left free to roam his favorite pastures. Happily for us, the horse has no reason; consequently no consciousness of imposition; and as a corollary, no thought of disobedience, except impulsiveness, when the law of his nature is violated.

The second proposition is that the horse has no consciousness of his strength beyond his experience, and that, accordingly, he can be handled according to our will, without force. Every one acquainted with horses knows the truth of the first part of this proposition, and the latter part follows logically from it. The third proposition is that the horse will permit any object, however frightful in appearance, to come around, over, or on him, that does not inflict pain. When fear exists from imagination, and not from the infliction of pain, that fear can be removed by showing that there is no cause for the imaginary danger. A boy, who has been frightened by a false face, or any other object that he cannot comprehend at once, will lose all his terrors if he handles the false face, or approaches the supposed spectre. So a horse, when he has familiarized himself with a stump, a robe, or other object of alarm, no longer starts, or trembles. If a horse becomes alarmed at any object on the road-side, coax him up to it, let him stand by it and touch it with his nose, and his fright will disappear.

These are the principles of Mr. Rarey's theory. They are founded on facts familiar to horsemen, and which have been made use of by thousands. The merit of Mr. Rarey consists not in the discovery of these facts, not even in the acknowledgment of them as principles, but in the very successful manner in which he has put them into operation. Many men may understand an art theoretically, yet want the executive faculty to practise it skilfully. There are persons who have had to do with horses all their lives, without acquiring as much control over them as others who have just begun to manage them. Some people have what we have heard called a magnetism in this matter. But this magnetism, we take it, is only a skilful executive. Mr. Rarey evidently possesses this faculty in the highest perfection; and, without it, we suspect his theory would practically be of little use. We have now the explanation why many persons, who have taken lessons of Mr. Rarey and his pupils, fall so far short of the performances of their teachers. After all, the great merit of Mr. Rarey's school is that it will entirely explode the old, cruel methods of breaking, and introduce others more consistent with humanity to the horse. Bancher's system of breaking dragoon horses, and saddle horses generally, proceeds on the humane principle.—*Philadelphia Ledger.*

ORIGIN OF BRANDY.

Brandy began to be distilled in France about the year 1313, but it was prepared only as a medicine, and was considered as possessing such marvellous strengthening and sanitary powers that the physicians named it "the water of life," *(l'eau de vie,)* a name it still retains, though now rendered, by excessive potations, one of life's most powerful and prevalent destroyers. Raymond Lully, a disciple of Arnold de Villa Nova, considered this admirable essence of wine to be an emanation from the Divinity, and that it was intended to re-animate and prolong the life of man. He even thought that this discovery indicated that the time had arrived for the consummation of all things—the end of the world. Before the means of determining the true quantity of alcohol in spirits were known, the dealers were in the habit of employing a very rude method of forming a notion of the strength. A given quantity of the spirits was poured upon a quantity of gunpowder in a dish and set on fire. If at the end of the combustion the gunpowder continued dry enough, it exploded, but if it had been wet by the water in the spirits, the flame of the alcohol went out without setting the powder on fire. This was called the proof. Spirits which kindled gunpowder were said to be above proof.

From the origin of the term "proof," it is obvious that its meaning must at first have been very indefinite. It could serve only to point out those spirits which are too weak to kindle gunpowder, but could not give any information respecting the relative strength of those spirits which were above proof. Even the strength of proof was not fixed, because it was influenced by the quantity of spirits employed—a small quantity of weaker spirit might be made to kindle gunpowder, while a greater quantity of a stronger might fail. Clark, in his hydrometer, which was invented about the year 1730, fixed the strength of proof spirits on the stem at the specific gravity of 0.920 at the temperature of 60 degrees. This is the strength at which proof spirit is fixed in Great Britain by act of Parliament, and at this strength it is no more than a mixture of 49 pounds of pure alcohol with 51 pounds of water. Brandy, rum, gin, and whiskey contain nearly similar proportions.—*Scientific American.*

FIRES AND FIRE SYSTEMS.—MR. JOSEPH BIRD, of Mount Auburn, has published a pamphlet of sixteen pages on this subject, which we commend especially to all city and town authorities, and to all the world beside. Mr. Bird is far from being alone in the belief that our "Fire Systems" are extravagantly expensive and ruinous in their tendencies both to property and men. Nearly all persons would believe this if they were to read Mr. Bird's three chapters on the subject of Fires and Fire Systems.

For the New England Farmer.

WIRE FENCES ONCE MORE.

How to Make the Posts—A Yankee Invention Wanted.

Exeter, N. H., Aug. 14, 1858.

FRIEND C.:—In my letter about wire fences, I see, now it is printed, that I overlooked a point that may be important to you, who want a fence that will not disfigure your beautiful grounds. For intermediate posts, you may use tire iron set in stone. There are many such posts used in Exeter, where we run a wire or two through our half-grown hedges to give them strength against cattle. We use iron of about the size of the tire of light wagon wheels. Short stone posts are set, say three feet into the ground, and holes drilled into the tops. The iron cut into suitable lengths, is rounded to fit the holes where it enters the stone, and fastened in with lead or sulphur. The wires are then passed through holes in the iron, previously punched or drilled by a blacksmith, at such distances apart, as you wish the wires to be held. The wires are passed through these holes, and strained at the ends. You may thus make the fence invisible, at a few feet distance, and the posts will have strength enough, so that you may make curves, if you desire to do so, and the work will be permanent. The stone posts should rise but an inch or two above the surface.

Some Yankee ought to invent a strong, cheap spring to hold the wires, at their tension. There is no elasticity to wire strained in the way I have before described, and a very little slackening of it impairs the strength of the fence. The spring should hold a strain of about 300 pounds. Please invent one, *pro bono publico*, and make yourself famous. Truly, your friend,

H. F. FRENCH.

For the New England Farmer.

INJURIES BY LIGHTNING.

The simultaneous injuries to persons and property, that have recently occurred at Salem and the adjoining towns by lightning, in buildings that were supposed to be secured by conductors of copper or iron in the usual forms, has awakened much inquiry as to the sufficiency of such conductors. We are pleased to notice that gentlemen of competent ability have taken the matter in hand, and hope they will pursue their inquiries, until they, at least, shall be fully satisfied of the cause of the accidents mentioned.

Whether it were from the insufficiency of the conductors; or their improper position; or from any other cause, is a fair subject of inquiry. There can be no doubt that the community are often greatly abused, by the false pretences of those, who operate for their relief, with little or no knowledge of what they do. We do not pretend to prescribe rules of action; our object will be fully attained, if we can guard against inconsiderate action. We believe that FRANKLIN had a very clear apprehension of what he prescribed; and we doubt whether subsequent alterations have all been improvements. ESSEX.

Aug. 16, 1858.

EXTRACTS AND REPLIES.

LEAKING COWS' TEATS.

"A Subscriber" inquires in your paper if there is any remedy for cows leaking their milk? I reply there is. Dip the end of the teat in strong alum water twice a day, for several days, and the leak will cease.

Milford, 1858.

MUCK, SALT AND LIME, COMPOST.

In composting muck with salt and lime, I wish to inquire whether the muck should be wet or dry, and in what quantities salt, lime and muck should be used, and how long it should stand before using? A. B. FRANKLIN.

Seekonk, Mass., Aug., 1858.

REMARKS.—Muck that has been lying out of doors, will be sufficiently moist to dissolve salt, or to receive air-slaked lime favorably. Six or eight bushels of lime and three or four bushels of salt thoroughly mixed with one hundred bushels of muck will form an excellent compost. If the muck has been exposed to the air several months, the compost may be used as soon as mixed; if not, let it stand three or four weeks in the mixed condition.

A FINE CALF.

I have a heifer calf, a cross of Durham and Native, four months old yesterday, that weighs 370 lbs. We are taking measures to raise the very best stock in this vicinity, which has long been neglected. W. P. HOOD.

DISTURBING THE ROOTS OF PLANTS.

Does it not materially retard the growth of a plant to disturb its roots?

And as, after corn has tasselled, its roots and fibres form a perfect network over the field, would it not retard the growth of the plant to cultivate and hoe it, thereby tearing and disturbing its roots, after it had so far advanced towards maturity?

The above questions came into my mind after perusing the article in a late *Farmer* advocating hoeing until harvest,—and if you can enlighten me on this point you will greatly oblige a

YOUNG FARMER.

North Billerica, July 26, 1858.

REMARKS.—There can be no doubt, we think, but that rudely disturbing the roots of a plant would injure it.

But, is it necessary, in order to keep a crop of corn clean, for instance, to disturb its roots? Would not the good judgment of the cultivator suggest to him that he could plow or cultivate with safety in the early stages of the crop, but that as it advances, the hoe only would be safe, and would be sufficient, with the aid of the hands

in pulling the weeds, to do all that would be necessary? Hoeing is essential, whether there are weeds or not, and we hope our "Young Farmer" will try it next year on some crop, hoeing one portion of it twice or three times as much as the other, and let us have the benefit of the result.

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MEMORY OF THE HORSE.

The horse, like all other animals, once ran wild; but by various ways and methods has been made one of the most useful animals ever yet tamed. He can be made to run, jump, dance, lie down, or anything of the kind, and even talk, as every animal has a peculiar way of communicating with each other as well as man. What I now wish to speak of is the treat ment of the horse. If a horse once gets frightened at a certain object by the road-side, and you whip him, he will be sure to dodge at the same object or place that he first got frightened at. One day I was engaged in hitching a team before a wagon, and one horse, with the quickness of a cat, plowed his teeth against my head, which felt like the weight of a two-fisted giant. The next thing that occurred was a heavy club falling upon the poor animal's head; and now, whenever I pass by him, his head is suddenly turned from me. By such treatment a horse will long remember his master or any other one who takes similar means to subdue him. It is fear that causes an animal to shrink from your presence. We are all too apt to be harsh with our animals, and should study their natures, and learn to treat them with kindness. L. F.

Brandon, Vt., 1858.

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A SICK COLT.

I have a colt three years old last spring; in March last she had the common horse ail, and when I turned her out to grass she was apparently well of it. After being out awhile, I noticed that at times she had a difficulty in breathing, which still continues. She is thriving well, and is lively and inclined to caper in the pasture, but after doing so, breathes with great difficulty. In two instances I have seen her fall, and after lying a few minutes, get up and breathe well; the trouble is evidently on her lungs.

Now I wish to ask if you, or any of your numerous readers, know of any remedy for the case, and if so, you will confer a favor by inserting it in the *Farmer*. N. H. COOK.

North Parsonsfield, Me., Aug., 1858.

AN EXPERIMENT IN DRAINING.

EXPLANATION OF THE ENGRAVING.

A, is a piece of land containing about an acre, used as a *vegetable garden* on the lower side, and above is filled with pear and other trees, shrubs and small fruits.

B, and F, show the line of the main drain; F also shows the junction of the old stone drain, with the main pipe drain.

C, shows the lateral drains extending into the garden.

D, is a "Peep Hole" or Well, in which may be seen at any time, how much water is passing through the main drain.

E, is the line of a stone drain laid in 1849.

G, and H, show lateral drains running into I, and G also shows the highest land in that direction.

I, is another main drain, receiving the laterals H, and draining the hill on the west side of the low land which is designated by its lighter color. On this side hil' here is a young orch-

ard of three acres. The curved lines across the meadow represent a cart road.

When we purchased this piece of land in 1848, all the low parts were covered with water-grasses, and the usual variety of wild plants common in our New England meadows,—and among which was interspersed in plentiful profusion, the fragrant skunk cabbage, with its large, bright green leaves, and for a time almost covering every other plant. It produced almost a ton of poor fodder per acre. In 1849, we laid a common stone drain two feet deep with a six-inch gullet, which is represented on the cut by the dotted line E. The effect of the draining, plowing, and a slight manuring, was, to change the crop the second year from one ton of poor meadow hay per acre, to *three tons of good English hay per acre!* But the draining was not sufficiently deep to ensure good permanent results; the stone drain got gradually choked up by the operations of mice, and other causes, and the water burst up in little jets in several places. Nature then resumed her sway, and brought up the rushes and coarse grasses that delight in an abundance of water.

That portion of the land on the margin of the the meadow, and represented by the letter A, was never materially affected by the stone drain, —but continued wet late in the spring, and was continually throwing up a hardy meadow grass with a bulbous root, whose botanical name we do not know. This piece was plowed eleven inches deep, well manured, and sowed with carrots, but proved to be too moist to bring a profitable crop. In the spring of '57, it was plowed with difficulty on the *29th of May*, and was then so wet as to leave portions of the furrows in compact masses, which were afterwards broken to pieces with great labor with the hoe. In the spring of '58, less than six months after it was drained, it could have been plowed with comfort at any time after the 10th of April; and during the wet month of May which followed, and at any time since, notwithstanding the constant succession of rains, the soil has been so light and porous as to fall to pieces whenever it has been worked. It is now covered with the heaviest crops that have ever stood upon it.

The drains are sunk *four feet* deep, and laid with burnt clay pipe or tile. The pipes in the main drain are three inches in diameter, and those in the lateral drains two inches, and the drains cost, completed, *seventy cents* a rod. This cost, however, will vary as wages vary, and as the soil to be dug through varies. The subsoil to be dug through in this case was extremely hard, and we were obliged to dig much too wide, for want of suitable tools. The average cost will probably be less than *fifty* cents a rod.

By reference to the plan it will be observed that the lateral drains are not all at an equal distance apart, or of the same length. These were varied in length and width according to the the condition of the ground, being brought nearer or made to penetrate the hill farther, wherever there were indications of a superabundance of water.

The experiment, so far, affords us the highest gratification. Some of the advantages gained are, that the season on that land is lengthened some two to four weeks,—that it can be cultivated with more facility and comfort and at much less cost, and that it is capable of producing much larger crops at the same expense than before, and consequently will give a greater net profit.

For the New England Farmer.

ELECTRICAL PHENOMENA.

At the coming up of the shower on Friday last, about 2 o'clock, P. M., the barn of Mr. Phillips, of Swampscot, containing fifty or more tons of hay, was set on fire by lightning and entirely burned. I have often heard it said, that barns filled with *new mown hay* are more liable to be fired by lightning than at any other time, or than any other buildings. If this be so, there must be a reason for it. Can you, Mr. Editor, give us any information on this matter?

I noticed the cloud on Friday, as it rose at the north, and moved terrifically on to the south; and just as it appeared overhead, it was met by another cloud from the west. At this junction the crashing of the thunder was tremendous. This was before the rain commenced; and so was the firing of the barn. About the same time a man was killed two miles north of us, and another was paralyzed, about one mile to the east. I remember the first fire caused by lightning I ever knew, was the barn of Dr. Amos Putnam, of Danvers, when I was at school. I was so much frightened by this event, that I have taken particular notice, when barns are burned by lightning, ever since. If it be true that conductors can be so placed on buildings as to protect them; and that the barns of farmers, after their hay is gathered in, are specially liable to be burned, it behoves them to be on their guard. So little is known of the laws by which lightning is regulated, that all facts carefully observed, connected therewith, are worthy to be recorded. P.

South Danvers, Aug. 9, 1858.

REMARKS.—We prefer to leave the question propounded by friend P. to be answered by those possessing exact knowledge of the laws and nature of electricity.

WILLIAM F. BASSETT, Esq., of Ashfield, Mass., has presented us with some fine Ladies' Sweeting Apples, of last year's growth. They retain their plumpness and color admirably, and have received no other care than being kept open in the cellar.

For the New England Farmer.

LETTER FROM MR. HOLBROOK.

Abortion in Cows—The Universal Plow—A fine Corn Field—Superphosphate of Lime—Another field of Corn under different treatment—An Old Pasture Revived—Effects of Bone Dust, Guano, and Unleached Ashes.

MR. BROWN:—*My Dear Sir*—I hoped to spend a day with you ere this, and to have a pleasant chat upon various topics, but one thing and another has come up to prevent. I have several interesting matters in reserve, to discuss with you when we meet again. Many things present themselves to one of an observing mind, in the course of a season upon the farm, which much engage his thoughts, and about which he likes to talk with a friend who feels an interest in them kindred with his own. I often think how much we should enjoy, if we could easily and frequently meet together, and canvass the various subjects of agriculture which our meeting would of itself naturally bring up. You doubtless remember how unconsciously we have neared the midnight hour, on those occasions when we have sat down together for an evening's agricultural talk. If one could only write on these subjects, by himself, half as well as he can talk them, prompted and excited by conversation with a friend, there might be something done. But although these occasional social meetings, when we live down months in moments, have an important after influence in directing and shaping our views and thoughts, they also have aspects of a nature too etherial and exalted to be long detained in this dusty life of ours.

Among our topics when I was last at your house at Concord, I remember was that of Farm Stock, and the difficulty that has appeared among the cows in your locality, where numbers of them are kept together. I afterwards received a polite invitation from the Secretary of your *Farmers' Club*, to be present at a meeting of the club, when this matter would come up for discussion; but much to my regret, I could not comply with the invitation. Have you found the cause of the difficulty; and if so, why not publish a statement about it in the *Farmer*?

I presume you used the Universal Plow upon your farm again last spring, and lent it to some of your neighbors to try; and I hope it worked as satisfactorily as at our trial of it at your place last fall. Several persons in this section have used the plow, changing it variously for stubble, lap and flat furrow, sod, and sod and subsoil plowing, and are well pleased with it. It was a long and perplexing study to originate and combine in a simple way the various parts of this instrument, but there is a wide variety and a quality of plowing to be got out of it, which I trust will suit the farmers, and prove an economical convenience for them.

I have been rambling to-day among the fields, and have found some things which interest me so much that I will mention them to you. I first looked at a field of corn belonging to my friend, RICHARDS BRADLEY, Esq. It is a remarkable and interesting sight, especially considering the condition of the land a year ago, and the contrast between its present product and that of the surrounding unimproved land. Mr. Bradley purchased quite a tract of land last year, in very low condition, but naturally of a good loam soil, which he intends to improve for tillage purposes. Certainly, judging from the success of this first effort, the whole tract will in a few years be made to "blossom as the rose."

This corn-field consists of between three and four acres of the poorest part of the land purchased. It had formerly been much reduced in fertility by shallow plowing and severe cropping with rye and other grain, and for a few years past was allowed to lie in pasture, and had covered itself with a light sward of grass and moss, interspersed with sweet fern, scattering shrub-pines and other bushes. Last November the land was broken up, nine inches deep, with the Universal Plow rigged in sod and subsoil fashion, and drawn by four cattle,—the plowing being handsomely executed and all the vegetable growth well buried. In the spring the field was dressed with twenty-five two horse loads, or about fourteen cords, of stable manure to the acre, which was spread broadcast and turned under from four to five inches deep, with a light steel plow, so sharp on its cutting edges as to shave off a thin furrow without pulling up the sod that had been buried in the fall. The ground was then lightly harrowed, and marked out in rows one way, three and a half feet apart, and the hills were made two and a half feet apart in the rows.

About a common table-spoonful of superphosphate of lime was placed in each hill, and the corn was dropped directly upon and in contact with it. A few rows, however, were planted without superphosphate, and a few others had as much as a single handful of it applied to each hill, by way of experiment. The corn generally came up well, and has grown with remarkable rapidity ever since. The ears stand thickly, and the stalks have a deep green and healthy appearance. There has been no drought, high wind nor storm as yet to injure the corn, and there is every prospect now that the yield of corn and of fodder will be quite large,—sufficient to more than pay for all that has been done to the land, leaving it in a highly improved condition for succeeding crops. The best corn is where a spoonful of superphosphate was applied in the hill; the poorest is where none was used; and where a handful was applied, the corn that came up and survived is now stout and good, but so large a dose of the fertilizer rather prevented the corn from coming up as evenly and well as where a less quantity was applied; and the large dose somewhat injured the young, delicate roots of the corn, and considerably retarded its growth for several weeks.

The land had heretofore been plowed only about four to five inches deep, and had been severely taxed to that depth. Last November it was broken up about twice as deep as ever before, which brought up four or five inches of soil to cultivation that had never seen daylight, and which seems to operate upon the corn like fresh soil. The plowed land changed color very perceptibly soon after it was turned up, and before winter set in it was of a darker hue, by several shades, than when first plowed.

My walk next brought me to one of my own corn-fields, which I have been observing pretty closely all summer. The land was heavily manured this season, with fine rotten compost, which was plowed under the turf, say about sev-

en inches deep. It has been my usual custom, when using compost manure upon sod land, for corn, to first plow the land from seven to ten inches deep, according to its qualities, and then spread the compost upon the plowed land and harrow and lightly plow it in, so as to cover it three or four inches deep. The manure thus treated has always made a heavy crop of corn and fodder, and nothing has been needed in the hill to bring the crop forward early, for the roots very soon struck through the mellow seed-bed into the manure, so as to give the corn a rapid growth. This year, however, I thought I would try one field of corn more, with the compost turned under the sod.

The corn stands quite even, and is of pretty good color and size, but backward, and lacks that great stout growth my fields usually show at this season of the year. It may in the end come up to a favorable comparison with previous crops, where the manure was kept nearer the surface, but I have my doubts about it. The compost being already fermented and rotten, it lies too dead and inactive at the bottom of the furrow and under the sod. Perhaps when it is turned up to the surface again, for succeeding crops, it will make a satisfactory mark upon them; but I fear it is one year too late to suit me exactly. Coarse unfermented manure would have done better under the turf; or if the land had been stubble instead of green sward, the compost would have done better plowed in seven inches deep. From experiments I had tried years ago, I felt pretty sure I knew about this matter of burying fine manure under the turf, but still I tried it again, with something of the spirit a friend once manifested when I was looking over his farm with him. He was quite as particular to show me all the failures, as the successes in his farming, remarking—"I tried this or that so, because I want to know what wont do as well as what will."

I next visited a tract of upland pasture, in which is a piece of twelve acres, that four years since was the poorest part of the whole, and was plowed up and re-seeded at once to grass. You may remember that I mentioned this piece of land in a communication to the *Farmer*, two years ago this present month. The land was covered with a sward of moss and feeble grasses, with bushes and shrubs of various sorts, the largest of which were pulled up with the oxen, root and branch, and hauled off the field and burned. In the month of August the land was broken up about six inches deep, with a large plow drawn by two yokes of oxen, and much pains was taken to lay the sward over smooth and flat, so as to bury the old vegetation, and make a good clean surface for the new seeding. A part of the field was then dressed with 400 lbs. of bone dust per acre, a part with 300 lbs. of Peruvian guano, and the balance with twenty bushels of unleached ashes to the acre, and the land harrowed lengthwise and across the furrows. Twelve quarts of herds grass and one bushel of red-top seed, together with about one bushel of winter rye, were then sown on each acre, and the land lightly harrowed, and smoothed down with the roller. The rye was fed off by the cows, while the young grass was getting root, and was not allowed to mature into a grain crop.

The new seeding came up well, and has ever since afforded excellent pasturage. The grass today stands thick and strong, and has a life and vigor about it not possessed by that on the surrounding old swards. There is apparently little or no difference in the beneficial effects of the ashes and the bone dust. The grass on that portion of the field where the guano was applied is good, but not quite so thick and strong as where the ashes and the bone were used. The cows visit the field daily, keeping the grass down very close and smooth, and apparently preferring it to any other feed in the entire range of pasture. The contrast is quite marked between the green and luxuriant grass of this field, and the brown and dingy vegetation of the adjoining lands; so great, indeed, as to leave no doubt in the mind of the observer that it will be best to plow up the remainder of the tract and seed it anew.

I wish that persons who have tolerably smooth old pasture lands, where the grass is feeble and poor and needs renewing, might try the effects of plowing up and re-seeding at least an acre or two. The work should be done in August, or quite early in September, turning the sod over just as nicely as it can be done. If a light dressing of ashes or some other concentrated fertilizer can be had, that will help the young grass to come up well. Even ten bushels of unleached ashes to the acre would show good effects; and so would a mixture of say five bushels of ashes with two or three hundred weight of plaster to the acre. But even without these applications, the pasture will be improved by plowing and re-seeding. The old bound out sward of moss and grasses of inferior quality, the sweet fern and other small bushes, and the cattle droppings, being turned smoothly under, decompose gradually and give nourishment to the better grasses of the new seeding. In no case, however, should a crop of grain be taken off, unless the land has been fully compensated by the application of some fertilizer to it, for the grain would tax the land too much, and bring in moss and other poor herbage, thus preventing all improvement.

Well, my friend, this has become a long story of mine, but if you will just come and take a tramp round the fields here with me, I will show you a great deal more than I can communicate by writing.

Brattleboro', Aug. 2, 1858.

REMARKS.—Thank you, for the invitation, but we must take our "tramp" in another direction at present.

The "Concord Farmers' Club" has never found any satisfactory cause for the abortion in cows which prevails to such an extent in that vicinity. One farmer in Concord told us he would pay $200 a year as a guaranty against that disease. We have known 30 cases in a single neighborhood during one spring season. It seems to occur equally among cows fed and stabled in all the usual ways—so that it is not confined to cows fed with oat meal, corn meal, shorts, roots, or on hay alone, or tied with chains, bows or stanchions—it occurs among them all, and is one of our greatest hindrances to profitable farming. Who can solve the knotty question?

We have used the Universal Plow, and so have our neighbors, with great gratification and profit. Mr. WOOD, who was present at the trial with you, recently plowed two acres of old sward land immediately after it was mowed, with the skim plow affixed, and we believe we are entirely within bounds in saying that not a single peck of grass could have been gathered on the whole two acres after it was plowed. Every thing green was covered, and the furrows were so minutely cracked or broken that *no harrowing was needed* to put in a crop of ruta bagas; it was furrowed out, manured in the furrows, seeded and covered with great ease and convenience, without the use of the harrow.

For the New England Farmer.

SALTING HAY—MARSH HAY.

MR. EDITOR:—In a catching season like the present it is with difficulty that farmers can safely secure their hay. I can scarcely get two whole days of good hay weather, consequently I am often obliged to get it in before it is fully made, or run the risk of another storm; and am under the necessity of using more or less salt.

A difference in opinion prevails as to the amount of salt to be used, as regards the health, and thrift, of our cattle. Some object to as much as 6 or 8 quarts to a ton, because, they say, if an animal should have access to salt, he would not devour as much while eating a ton of hay, and if he is obliged to take more than his appetite would crave, it does him injury.

In the eastern part of Essex county a large amount of salt hay is used; some farmers keep their young stock and oxen that don't work hard, almost exclusively on salt hay, and if they are well attended to, they generally thrive and appear to be in perfect health. There is a difference in the amount of salt contained in a ton of salt hay; that which grows on very low meadow, and remote from fresh water streams, being more salt than that from higher meadow, and perhaps near the mouth of a river. If it is cut after a high run of tides, before any rain has fallen to wash the salt from the grass, and secured without rain, it is more salt than that which has been washed either before or after it is cut.

Can any one tell how much salt it would take to make a ton of English or fresh meadow hay, as salt as salt hay from low marsh, secured without rain? I think myself it would be more than 8, 10, or 12 quarts per ton; and still, on this very salt fodder, cattle thrive and appear to be in perfect health, as indicated by their glossy coat, bright eye, and active movements.

HAY-MAKER.

Newburyport, Aug. 10, 1858.

THE HORTICULTURIST for August is a capital number. The leading article by the Editor, J. JAY SMITH, is racy and reasonable. The illustrations are pleasant, and the articles various and practical—the one on Roots, discussing the roots of plants, is excellent. We are pleased to see occasional articles from our southern friends in this popular journal. Published by SAXTON, 25 Park Row, New York.

LETTER FROM MR. BROWN.

Francestown, N. H., Aug. 10, 1858.

DEAR SIR:—My last letter was dated on the flat lands of Plymouth county, Mass., on the shores of Buzzard's Bay; now I date from one of the most romantic spots that New England affords. The sun is just rising, lighting up the whole eastern horizon, and every hill top that lifts its head between me and the Atlantic coast. A vast basin lies before me, presenting an apparent confusion of rocks, hills, valleys, forests and ponds, but upon travelling through it, is found to be threaded with excellent roads, with sweet and fertilizing streams, and checkered with productive farms, the abodes of intelligent and industrious free-holders. This town was the birthplace of the late Hon. LEVI WOODBURY, Secretary of the Treasury during the administration of Mr. Polk, and one of the Judges of the U. S. Supreme Court at the time of his decease. His father died here in 1823, at the advanced age of 85. He was an active soldier in the old French war, and was engaged by the side of Gen. Wolfe when he was killed at the memorable siege of Quebec. He was one of the truly invincible *rangers* under the immortal STARK, and discharged every duty in a prompt and courageous manner. This town was also the scene of some serious Indian troubles. A story is told of one RICHARD BATTEN, who was captured by them in the year 1757. Although guarded by two warriors, by his wonderful strength and agility he effected his escape, but not without the loss of all his clothes. He wandered entirely naked between the lakes George and Champlain for six days, eating nothing but berries and bark, and swam the Hudson river three times, in order the more effectually to elude his pursuers.

There is here an extensive and valuable quarry of freestone, which used to be transported to Boston in large quantities. In the north part of the town black lead is found of a good quality. But what sound is that! The tramp of horses and the rattling of stage wheels! Familiar once as household words, and still familiar here, where the shrill note of the locomotive whistle has never yet echoed among the hills. Ten, twelve, fifteen miles to the nearest station! How *do* the people get out to mingle with the great world! By stages, sir, and by means of their light vehicles and hardy horses that are bred upon the hills. Why, the terms used "On Change," or on the Court side of "Washington Street," are almost as familiar here as there own vernacular language, while ample hoops distend skirts of the finest

fabric, or high heels set fair damsels a tiptoe in every lovely vale or on every breezy hill I have visited. You cannot hem in a true Yankee, body or soul, or draw a cordon thick and strong enough to keep the fashions away from a young Yankee girl whose pulses are beating with health and joy—bless her heart—among these healthful and inspiring hills. When you come into this region, you will find a touch of the modern in every thing, whether railroads traverse it or not. The same *animus* that moves the modes and styles on the pavements, inspires the same nature in this world among the clouds—so that you not only find a pleasant elegance in the sitting-room and parlor, and often in the architectural taste manifested in the construction of new buildings, but a suavity of manner and a refinement of feeling, not often surpassed in any New England society. The stage we passed to-day had *eighteen passengers* on and in it, beside the driver, and a world of baggage, probably just from some fashionable resort on the sea-shore, Hampton, Cohasset or Nahant! What power could keep these "free and independent" people *in*, is a question more pertinent than to ask how they get *out*.

But my good steed is at the door; the hot coffee, corn bread and sweet butter have received due attention, and I must now be on the road again. Old Monadnock and the White Mountain range are in view, as we snuff the cool mountain air, and slowly creep down "Cork Hill," and approach the sources of the ancient Piscataquog, where the Indian once threw his spear, and built his forest fire.

Before closing this sheet, I cannot forbear to speak of the excellent roads which I travel over in every part of this State. I have not found their equal in any part of Massachusetts, for an equal extent. On inquiring of Capt. JOSIAH STONE, of Hancock, how they managed them, he said that as early in April as the condition of the roads would permit, they pass over them with a heavy harrow, stirring the gravel as deep as they can make the teeth of the harrow penetrate. A slight filling up of the low places, and a rolling finishes the work, and the result is the finest country roads we have ever travelled over.

Very truly yours, SIMON BROWN.

Joel Nourse, Esq., Boston.

FRANKLIN COUNTY FAIR, VT.—We learn with pleasure that Col. DANIEL NEEDHAM, of Hartford, Vt., will deliver the annual address before the *Franklin County Agricultural Society* of that State, at St. Albans, on the thirtieth of September next. The Col. is a practical, as well as an educated man, and he will prepare an address that will be profitable to those who give their attention to it.

For the New England Farmer.

MATTERS IN IOWA.

I wish all discontented New England farmers could be out West this summer. It would teach them a lesson which they very much need to learn, viz., to stop croaking. Of all the hard, dull, blue times I ever knew in Massachusetts, the present times in Iowa are the bluest. Property of all kinds, except money, has depreciated from one-third to one-half its estimated value one year ago. There is not half so much money in circulation as there was a year ago. The crop of wheat and oats, in a large part of the State, is less than half of last year; and in many instances will not pay for harvesting. My nearest neighbor has sold his wheat in the field for the seed; *i. e.*, as many bushels as he sowed. Another neighbor does not consider his worth cutting. The season has been very wet, more so than was ever known before. Weeds and vines are rank enough; corn and potatoes doubtful, as yet. Moreover, almost everybody is in debt, and, like a fly in molasses, can't get out. The harder one tries, the worse off he becomes. Borrowing money only sinks him in deeper trouble; for interest is high, and property is stationary or still depreciating. Many will be obliged to give up their farms, one-half and two-thirds paid for, to cancel the balance.

The prospect for another year is dark enough. Immigration from the East has been less than usual, and few improvements are being made. We have enough to eat for some time to come. And so have the farmers of Massachusetts; and in addition to that, they have many other comforts and conveniences which cannot be had here.

Nevertheless, as Mrs. Hemans has beautifully sung:—

> "The gloomiest soul is not all gloom;
> The saddest heart is not all sadness;
> And sweetly o'er the darkest doom,
> There shines some lingering beam of gladness."

There must, it would seem, some good grow out of all this evil and trial. It will curtail some of the reckless speculation which has raged for years past. It will show men the folly of running in debt so much, and the advantages of the cash system. Men are too eager to be rich and independent of labor; too much bent upon their own gratification and self-will; too impatient of the restraints of morality and religion. All this needs a powerful check, and the hard times would have been of but little benefit, if they had passed away as soon as men wished and prophesied. The medicine will not only be more bitter another year, but will effect a more thorough cure. Prosperity will doubtless return again, sometime, but not speedily; and herein, Gov. Seward, who foretold a recovery as rapid as the depression, has proved himself a mistaken prophet.

Yet some of our people have been so profoundly beguiled, that they are not yet awake to the stern reality. A man who came from New England some twenty years ago, told me, lately, that he did not believe he could get a living on one of the best farms around Boston. I replied that if I owned one of them, and was on it, I would *try*. If I owned only a very ordinary farm in any healthy, respectable locality in Massachusetts, I would not so far surrender my good sense to mere im-

agination, as to leave it, in the hope of bettering my condition by removing to Iowa, or any other place west of the Mississippi. And I consider Iowa as good a State as any other out of New England. It is certainly a healthy place where I am located. I have been here nearly three years, and in my capacity as the minister of more than an average congregation, have been called to attend but a single funeral, and that of an infant, for more than fourteen months; and of but a single adult during the whole three years.

My wife suggests that I shall be considered homesick, from my letter. I confess to a little of it; especially since the citizens of the county seat of Cedar, under the combined influence of the hard times, high taxes, party spirit, and ignorance of their own best interests, have just voted down a flourishing union school founded on the free school system lately adopted in this State. If the question should be asked, whether this type of sickness is not somewhat prevalent, just now, in our otherwise healthy State, truth would probably compel us to admit it. M. K. C.

Tipton, Iowa, July 30, 1858.

REMARKS.—We regret to hear so unfavorable accounts of matters in the West, and sincerely hope our friend's forebodings will be brightened by a good many gleams of sunshine which he cannot now anticipate. He will accept our thanks for the records of events in the West which he has been so kind as to frequently send us.

For the New England Farmer.

LETTER FROM A TRAVELLER.

Danvers, Aug. 3, 1858.

DEAR BROWN:—As I am roving about New England, I hardly know how I can better employ my time than in giving you a few of my experiences. My last letter was written at Chester. From that steady, unexcitable old place, the judge and your humble servant put out for Exeter, the day following that writing, where I remained until yesterday morning, when we took the cars—the judge and I—at half-past six, and arrived here—at the hospitable head-quarters of Major General William Sutton—between 9 and 10, A. M., where we met

"A more than Highland welcome."

Prior to dining, the General took us to the Peabody Institute, where we spent the best part of an hour in examining the interesting matters in that monument of liberality, which was erected by George Peabody, of London, as a token of his love and veneration for his native town. It contains a fine library, many curiosities of literature, such as autographs, autograph letters, &c., and other things which I cannot stop to particularise. Its lecture hall is one of the best arranged rooms I have ever seen, and capable of seating between 1500 and 2000 people comfortably. The building itself is plain, but handsome and substantially built, brick, enclosed in a handsome and durable iron fence. It is an honor to the town and the generous donor.

From thence we went to "Harmony Grove" cemetery; a very beautiful home for the dead, containing some forty acres of hill and dale, handsomely laid out, in which are some very handsome monuments, enclosures, &c. There is no more consoling observation for a living man than the one that cannot but be made, in these times, by every one, of the vast stride that has been made within the past twenty years toward a care by the living for a resting-place for the dead, that shall carry with it pleasant associations. Any one who will, as I did, visit the old, forlorn, weed and thistle clad cemetery near the Salem and Danvers line, whose chief attraction is, that there lie the remains of Elizabeth Whitman, once made famous among novel readers as "Eliza Wharton," and an hour afterward the beautiful "Harmony Grove," must be most forcibly struck with the immense change that has come over the public mind in respect to this matter.

We next called at the office of Mr. Proctor, one of your correspondents, I believe; but he was not in. He joined us, however, after dinner, and accompanied us in our *excursion* over Gen. Sutton's farm. As soon as we had partaken of dinner we started to see the farm. We visited the barns, tool-houses and work-shops first. The barns were filled—*stuffed* is a more appropriate word—with hay, and all the arrangements about them were of the most modern and approved kind; but I am not enough of a farmer to appreciate, perhaps, all that I saw there. I only know I was very much interested; but when I came to the tool-house and work-shop, I confess my admiration. In the former, there were shovels, spades, hoes, rakes, cultivators, plows, chains, scythes—indeed, about every tool necessary for the cultivation of the farm and garden, ancient and modern, old and new, and all arranged with a method that would do credit to your publisher's agricultural implement establishment. I have seen a great many tool-houses, but never one that came within a long distance of Gen. Sutton's. Of the work-shop I could judge, as I have one of my own, and should as soon think of getting along without cooking utensils in my house, as without a work-shop and tools. But, my friend the General's placed mine in total eclipse! With one of his arrangements I was particularly struck, and shall assuredly adopt it. I noticed that all his screws, small nails, tacks, rivets, and such small things, were sorted, and each sort put in a wide-mouthed glass bottle, giving his shelves somewhat the appearance of an apothecary's shop. It struck me as a capital, and most convenient arrangement. Indeed, method and order are impressed on every thing about the General's establishment.

From the buildings we proceeded to the farm, and we were taken a right good tramp, I assure you. The General's farm contains some 400 acres; we did not go *all* over it, but we saw enough to convince us that few farmers in old Essex will house more of the good things that the farm provides of all kinds than our friend. His corn, and potatoes, and onions, and turnips, and mangols, and khol-rabi, equalled any thing I have ever seen on anybody's farm. One of his mowers was upon the ground, which led to a conversation upon the subject of mowers, when he told us that he used a yoke of oxen, with a horse on before them, in mowing with his machine, and found it a very great improvement. The General and Judge had a regular talk, both

being farmers, on all sorts of farming matters, not forgetting, of course, *the draining of land*, and we were taken to that part of the farm which requires draining, and you may expect, in the course of another season, to hear the results from the judge's pen of our visit to that part of the farm.

On our arrival at the house we found the General's carriage ready to convey us to Mr. R. S. Fay's beautifully romantic farm in Lynn, where we spent several hours most pleasantly, and with much gratification and profit.

I have, however, written all I can find time to write to-day, and will say something particularly of our visit to Mr. Fay's, when I write again.

Adieu. In haste yours ever,

B. B. FRENCH.

For the New England Farmer.

THE HAY CROP OF 1858.

Notwithstanding the superabundant burden of grass grown upon the land, there is good reason to believe that the amount of *well cured hay* will fall much below the average quantity. Those who were on the alert, in the first of the season, by the use of mowers, or otherwise, and got their crops under cover, hit the nail on the head. One-half of the time for a month past has been better fitted to destroy than to cure hay. I have seen in the field, the present season, the Heath machine, the Allen machine, the Ketchum machine, the Manny machine, the Russell machine, the Danforth machine, with their several alterations and improvements, and the conclusion of the whole matter, in my mind is, there still remains much room for further improvement. There is so much hazarded in meddling with *edge tools*, that I am not prepared to express a preference for either of the implements mentioned, though I think either of them on large farms of fifty acres or more of land to be mowed, is to be preferred to the scythe.

August 10, 1858.

☞ A thousand acts of thought, and will, and deed, shape the features and expression of the soul—habits of love, and purity, and truth—habits of falsehood, malice, and uncleanness—silently mould and fashion it, till at length it wears the likeness of God, or the image and superscription of the Evil One.

BOYS' DEPARTMENT.

THE LITTLE STRINGS.

Did you ever see a gutta-percha face, children? And did you ever amuse yourself with pinching it one way and pulling it another, and seeing what different expressions it will put on? When you cease pulling and pinching it, it returns to the same face it was before.

Now your little faces are softer than gutta-percha, and they are full of the little strings called muscles; and the little muscles pull them one way, and pull them another, just according to your feelings. Sometimes you feel grieved or sad, and the little muscles pull your face into a very doleful expression, and we know by looking at you just how you feel. Sometimes you feel pleased or merry, and the little muscles pull your faces into smiles and dimples.

But often there are wicked passions at work at the strings. Anger pulls, and O, what a disagreeable look the face puts on in a minute. Pride pulls the strings, or vanity, or envy, or discontent, or deceit, and each brings its own expression over the face.

The worst of it is, that when these passions pull very often the face does not return to what it was before, but the muscles harden and retain that ugly expression. By indulging in evil passions people may work their faces up into such awful faces, that sometimes when you meet a man in the street you can tell, just by looking at his face, what his character is.

A face that was very lovely when it was that of a child, has had the passion of anger pulling at it so often that it always wears a sullen, cross, dissatisfied look. Or if a man has learned to love to hoard up money for its own sake, his face gets a mean, grasping look, and we say when we pass him, "There goes a miser." Or if he has learned to lie and steal, he cannot make his face that of a truthful, honest man.

Now, dear children, do you want to have pleasant faces, that every body will love to look at? *Then don't let the ugly passions get hold of the strings.* Put them into the hands of love and charity and good-will and truth and honesty, and then they will be beautiful faces.

I have seen faces without a single handsome feature, that were sweeter to look at than the most perefect features that ever were formed. And why? It was the *expression*. And what makes the expression? O, it all depends upon whether the bad passions or the lovely virtues get hold of the *little strings*.—*American Messenger*.

ALPHABET OF PROVERBS.

A grain of prudence is worth a pound of craft.
Boasters are cousins to liars.
Confession of a fault makes half amends.
Denying a fault doubles it.
Envy shooteth at others and wounds herself.
Foolish fear doubles danger.
God reaches us good things by our hands.
He has hard work who has nothing to do.
It costs more to revenge wrongs than to bear them.
Knavery is the worst trade.
Learning makes a man fit company for himself.
Modesty is a guard to virtue.
Not to hear conscience is the way to silence it.
One hour to-day is worth two to-morrow.
Proud looks make foul works in fair faces.
Quiet conscience gives quiet sleep.
Richest is he that wants least.
Small faults indulged are little thieves that let in greater.
The boughs that bear most hang lowest.
Upright walking is sure walking.
Virture and happiness are mother and daughter.
Wise men make more opportunities than they find.
You never lose by doing a good turn.
Zeal without knowledge is fire without light.

Young People's Pocket Book for 1858.

NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. X. BOSTON, OCTOBER, 1858. NO. 10.

JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS.

CALENDAR FOR OCTOBER.

Those virgin leaves, of purest vivid green,
Which charmed ere yet they trembled on the trees,
Now cheer the sober landscape in decay;
The Lime first fading, and the golden Birch,
With bark of silver line; the moss-grown Oak,
Tenacious of its leaves of russet brown;
The ensanguined Dogwood; and a thousand tints
Which Flora, dressed in all her pride of bloom,
Could scarcely equal, decorate the groves. *Aikin.*

OCTOBER, like every other month, has its peculiar characteristics, characteristics which, omitted, or changed for those of some other month, October would be October no longer. "The month that we have just left behind us was made up, for the most part, by consummations; the promises of the year being almost forgotten in the fulness of their performance, and the season standing still to enjoy itself, and to let its admirers satiate themselves upon the rich completeness of its charms. It is now gone, and October is come; and Hope is come with it; and the general impulse that we feel is, to *look forward again*, as we have done from the beginning of the year."

SEPTEMBER brought most of the crops to perfection—the small grains, and golden corn, the delicious fruits and substantial apple, continuous through the year, and excellent in so many forms, while some of the roots, careless of the frost, retain their rank foliage until severe cold weather sets in, and only yield to the united power of frosty nights and warm OCTOBER suns. The grass grows brown and sere, and cattle feed with cold noses, or look wistfully at the barn for a supply from their winter stores.

So in the animal kingdom; OCTOBER brings its influences upon them. Crickets are black and lusty, and full of song, and feed eagerly upon the apples left in their way. Scarcely a swallow of all the thousands that twittered about the barns, is left; the martins, also, that enlivened the cottage with their social habits, followed their instincts and are probably now passing a season of rest in milder climes with their young reared with us. The faint chirp of the bob-o-link that was occasionally heard high in the clear air late in SEPTEMBER, has now entirely ceased, and the numberless meadows made vocal by them in the Summer months, cannot claim one among them all to-day. They have now become objects for sportsmen on the margins of the Delaware, Potomac, and other rivers, where they collect in vast numbers to feed on the wild oats which abound there, and are called *Reed-birds*. Those that escape the slaughter here, continue their course still further south, and in the rice fields of Georgia and the contiguous States are esteemed a great delicacy as *Rice-birds*. But the Field Lark still springs from the grass, perches upon the highest twig of the old apple tree, and whistles as in JUNE. The Blue Jay, startled in her solitary haunts, screams and flies to a thicker retreat, making the woods ring with her energetic notes. Some of the smaller birds remain, but day by day become less frequent. But the year, in "all its aspects, has reached its grand climacteric, and is fast falling 'into the sere and yellow leaf.'" Every day a flower drops from out the wreath that binds its brow—not to be renewed. Every hour the sun looks more and more askance upon it, and the winds, those summer flatterers, come to it less fawningly. Every breath shakes down showers of its leafy attire, leaving it gradually barer and barer, for

the blasts of winter to blow through it. Every morning and evening takes away from it a portion of that light which gives beauty to its life, and chills it more and more into that torpor which at length constitutes its temporary death.

And yet October is beautiful still, no less for "what it gives than for what it takes away, and even for what it gives during the very act of taking away." It has its aspects of decay, and its aspects of unsurpassed attraction and beauty.

Aikin observes, the gloom of the falling year is in some measure enlivened during this month especially by the variety of colors, some lively and beautiful, put on by the fading leaves of trees and shrubs.

In fine weather many plants yet remain in flower which belong to summer; indeed, most of the summer plants still hold out a few flowers from their wet and semi-rotten stocks, which in a fine sunny noon would almost remind one of summer, were it not for the quantity of dead leaves which now cover the ground, and the deep autumnal coloring of those which remain on the trees. The Ash by this time has oftentimes quite cast its leaves; those of the Elm are greatly thinned, and the rest quite yellow. The Poplars are fast following, and the light foliage of the Mountain Ash lie scattered like its mouldering red berries, on the ground. The Beach, the Hornbeam, and the Oak, retain their leaves the longest, and even keep them all winter. Of fruit trees the Cherries, Apples and Pears are now shedding their leaves, while the Mulberry retains its green leaves to the last, and often keeps them all till the first smart frost, when they fall all at once. We have seen them drop on the rising of the Sun, after a frosty night, altogether like a shower. The fall of the leaf can be considered only as a "sloughing or casting off diseased or worn out parts," whether the injury to their constitution may arise from causes or from an exhaustion of their vital powers. Hence a separation takes place, either in the footstalk, or more usually at its base, and the dying part quits the vigorous one, which is promoted by the weight of the leaf itself, or by the action of autumnal winds upon its expanded form.

> The woodpath is carpeted over with leaves
> The glories of autumn obey;
> The Goddess of Plenty has bound up her sheaves,
> And carried the harvest away.

October presents many calls for the care and skill of the good farmer. Such of the *roots* as are most able to resist the frost and were left to mature under the friendly October suns, must be secured before the nights become too cold.

The *seed corn* should be selected before the general harvest takes place.

The *cider* should be made, and whatever care is bestowed to make it in a cleanly manner, and of sound apples, will be more than repaid in the excellence of the cider.

Potatoes, before the rot was known among them, were considered safer in the ground than in the cellar, until the frosts became quite severe. If they have remained sound until the first of the month, they will probably remain good, if not dug until late.

Apple trees may be transplanted advantageously in this month; a few days after the leaves have fallen from them, is a suitable time to dig them up for setting.

Next to June, October is a favorable time for *pruning*, and in the still and mild days it is a delightful employment.

The subject of *draining* is now attracting considerable attention; this month usually affords a good opportunity to engage in it.

Do not allow cattle to depend too long upon the frost-bitten grass,—but feed them liberally morning and evening, and they will be likely to enter upon their winter fare all the better for it.

October presents many opportunities for recreation and enjoyment, and the farmer and his family, surrounded as they are by pleasant associations, ought to be grateful and happy.

For the New England Farmer.

THE GROWTH OF TREES.

Trees grow faster or slower, according to the wetness and warmth of the season and richness of soil in which they are planted. By looking at the stems and branches of trees it may be seen at once how much more trees grow in one year than in another. In examining a white pine limb I found the growth was as follows: In 1851, the growth was small; in 1852, much shorter; 1853, very long; 1854, middling; 1855, long; 1856, short; 1857, long; 1858, long. An oak limb measured, gave a length of four inches for 1856; eight inches for 1857; seven inches for the present year, which has nearly closed for the growth of trees. The stumps of trees show the sam thing. The grains are wider or narrower, as th season has been favorable or unfavorable. Th leaves of trees are larger or smaller, as the season is wet or dry. In corn, wheat and rye, the influence of the season is attentively noticed, but in trees we seldom stop to measure the extent of their growth or the increase of their size. We feel no richer, nor poorer, for any influence the season may have on them. And yet a genial season promotes their growth as much as it does grass or grain. In a genial season, the fruit of trees is not only magnified, but multiplied, by the rapid growth of the branches. In general, a good grass year is a good tree year, though not always a good fruit year. The orchards and the woods are hard drinkers, and enlarge their dimensions accordingly.

The growth of trees is retarded or increased by the same causes which retard or increase the growth of grasses and grains. If apple, pear or

cherry trees are left to grow without manure or culture, they do not grow faster than Indian corn treated in the same way. Weeds, grasses and bushes take away the moisture and nutritious particles of the soil, just as they do from corn and rye. In a word, their growth is blasted.

Nothing is more common than for one tree or plant to blast another by abstracting its moisture and nourishment, and by obstructing its light. Notice the little trees growing in the vicinity and shade of larger ones. We all know how quickly weeds and grasses blast Indian corn by absorbing the moisture and manure of the surrounding soil. If we wish, therefore, to raise an orchard in the shortest possible time, we have only to treat it precisely as we do a cornfield. The trees must have a nursery-treatment until they attain to a middling size. Neither weeds, grass, nor any other plants, should be allowed to grow near them or in the same field. The trees should every year be manured with rich compost, and kept well plowed and hoed. They will then have nothing to impede their growth, and will rapidly attain to a large size. An orchard treated like an Indian cornfield, where fifty bushels to the acre are expected, would be none too well to experience the full benefit of the agricultural art, as it may be known at the present time. Under such a treatment they will attain to a greater size in seven years than in twenty, where they are left to themselves in an ordinary soil, to contend with weeds, grasses and bushes of all descriptions. Mind it where you will, those apple trees which grow near houses and barns, where the soil is the richest of any part of the farm, always grow rapidly, yield fruit abundantly, and of the largest size. Never be afraid of making the soil too rich; the richest new land has never been found too much so for fruit trees. Any land which is good for Indian corn, rye and wheat, is good for an orchard of apple trees. But avoid low, wet, clayey land, or land adapted to marsh grasses. It is neither congenial to the tree nor the fruit. People are so much accustomed to seeing orchards grow in a slow way, without manure or cultivation, that they are discouraged from planting them. Their patience is taxed too severely. In general they see the trees growing, or rather existing, twenty or twenty-five years, before they attain even to a middling size, whereas thrifty nursery trees three years of age, set in a genial soil, may easily be made to yield fruit in good quantity in four years more. Many trees in a genial soil grow as rapidly as Indian corn. They will show as great a length of stem, in the same time. If you wish to raise a large tree in a short space of time, you must give it as much food and drink as it wants, in the same way that you raise a large calf or a large turkey. Drink, especially, is everything to a tree, and, nothing else should absorb it. To serve them rightly, they should, in a dry time, be watered artificially.

RURAL ARTS.

Providence, R. I., July 1, 1858.

WHITE WINTER FLINT WHEAT.—A specimen before us from Mr. EDWIN TOWER is very fine indeed; the berries are large, plump and clear. It was raised on his grounds at South Hingham, and at the rate of *thirty-two* bushels per acre. Such wheat is well worth $2,50 a bushel for seed. *Fifty-five* dollars an acre, beside the straw, is a good product. We are quite confident that our people do not yet fully appreciate the value of this crop. A single acre of wheat like this on one of our small New England farms is an item of importance to the family, as it would leave the cash usually expended for flour to pay taxes or grocery bills.

For the New England Farmer.

MOVING POWER OF MOWERS.

An "old subscriber" asks whether oxen can be advantageously used in the mowing field for the cutting of grass? I think not, when horses can be had, because horses are more conveniently guided, and are more expeditious in their movements. On a neighbor's farm I have seen a *Ketchum's Mower* operated for several years by ox-power, and my impression has been, it was not the best of power for this purpose. It will do when no better can be had, but it is not a power to be recommended. So habituated are many of our farmers to the labor of the ox, that they seem to have no idea of anything being done without them. It is fair to say, that a pair of horses will move one-third faster than oxen, and that the driver can be better accommodated, when sitting upon the machine, than by being on foot by the side of the oxen. When thus on the machine, he can better adapt it to unevenness of surface or any obstruction that may be in the way; for very few of our fields are so completely even and smooth, as not to need these precautions.

The best mowing I have witnessed has been done by *Allen's Machine.* This moves with comparative ease of draft and without clogging. It will cut a swath full four feet wide, and when the team moves at the rate of three and a half miles an hour, it is easy to show that an acre an hour can be completed, leaving sufficient time for rest and repairs. I do not mean to say that other machines will not do equally well—I only speak of what I have actually witnessed.

Sept. 4, 1858.

ESSEX AGRICULTURAL SOCIETY.

The records of this time-honored Association show that the office of President has been holden as follows: by

T. Pickering, from 1818 to 1828	10	years.
F. Howes, from 1828 to 1831	3	"
E. Mosely, from 1831 to 1836	5	"
J. H. Duncan, from 1836 to 1839	3	"
J. Kittridge, from 1839 to 1841	2	"
L. Saltonstall, from 1841 to 1845	4	"
J. W. Proctor, from 1845 to 1852	7	"
M. Newell, from 1852 to 1856	4	"
R. S. Fay, from 1856 to 1858	2	"
	40	years.

Of whom Messrs. Duncan, Proctor and Fay still live. Its vested fund exceeds $10,000, and it has an experimental farm, valued at $6,000. Few societies have been more faithful to their trust—long may it prosper.

LETTER FROM MR. BROWN.

Newport, N. H., Aug. 12, 1858.

DEAR SIR:—Descending from the Francestown range of hills, I passed through portions of Deering, Antrim, Hillsborough, Washington and Goshen, to this place. Newport is the shire town of Sullivan county, has its Court-House and other public buildings, and is a pleasant and flourishing town. The *New Hampshire Argus and Spectator* is published here by Messrs. CARLETON & HARVEY, and the "Sugar River Bank" issues its handsome notes for value received. This town was the residence of Gov. METCALF during the time he occupied the gubernatorial chair, and is so now of the Hon. EDMUND BURKE, a member of Congress for two terms from this district, and subsequently Commissioner of Patents at Washington. The village nestles among the hills which surround it, and is skirted on its southwest borders by beautiful meadows through which flow the waters of three distinct streams, each bearing the name of Sugar River. These streams unite near the village, and then the waters go on their way through the town of Claremont to the Connecticut river.

The soil in this town is of three kinds; *alluvial* on the borders of the streams, forming rich and fertile meadows; back of these more dry and *gravelly*, and *moist* and *cold* on the hills and more elevated parts. Some of these lands are cultivated by skilful farmers, and afford all the substantial comforts of life. Fine horses, working oxen and beef cattle are raised here, while other products in various portions of the town, are mutton, wool and butter. Farmers in this region have not yet introduced the culture of roots for feeding to stock, and most of them, I think, do not appreciate their value for this purpose. I once had strong prejudices against the use of roots for cattle, unless it were for a period during the process of fattening, and it was only by careful reading and observation, added to actual experiment, that I became convinced that my prejudices were not well founded. It is my opinion, that the farmers of New England, with little or no more labor than they now bestow upon their farms, *can double their capacity for keeping stock, by the gradual introduction of root crops,—and that when the stock is doubled in amount, their profits will be equally increased!* I have often expressed this opinion before.

NICHOLAS BIDDLE, distinguished as he was as the chief engineer of the affairs of the U. S. Bank, was *a better farmer, than financier.* He was a man of great personal beauty, of the most acute observation and of versatile talent. His manners were winning, his voice full, rich and melodious, and he possessed such a just combination of graceful ease and dignity as to attract persons of all classes to himself, without any apparent effort on his part. Such is the account of him given me by the widow of the late Commodore Stewart, who knew him intimately, boy and man, during the whole of his life. In England, such a person would not only be competent to judge of what he saw, but would be at once favored with every possible facility for investigating any subject of his inquiry.

In an address of his delivered before the Philadelphia Agricultural Society in 1842, he made the following interesting and important remarks: —"It is strange how things so lowly acquire national importance. *The best farming is that which will give the greatest mass of sustenance to animals*—since the less land required for animals, the more can we give for the maintenance of human beings. That fine farming region, England, had reached the limit of its power of supporting animals—since it turned to the root culture it has more than doubled or quadrupled its power, and now, odd as the mingling of such dissimilar notions may seem, it is scarcely an exaggeration to say, that England's power is based upon its *iron*, its COAL, and TURNIPS." I am aware that the English farmer possesses advantages that we do not, in the mildness of his climate, which saves to him most of the expense which we must incur in harvesting and housing roots. Still, however, I am confident that an intelligent and certain progress in profits, will require us to resort to the cultivation of root crops. The expense heretofore attendant upon it will undoubtedly be materially lessened by implements better adapted to their culture, and by the experience to be gained in the production of a succession of crops. The opinions expressed by Judge FRENCH on this matter, since his agricultural tour in England, strongly confirm those which I had formed. A portion of the soil here, as in all the towns of New England, is well adapted to the common flat turnip, the ruta baga, carrot, red and white beet, parsnip and mangel wurtzel, and the climate is also favorable to each.

The country through which I travel presents quite an unusual appearance now in consequence of the great amount of grass remaining uncut. The cloudy and damp weather, rather than a large amount of rain, has prevented the cut grass from drying, so that nearly one-half of the upland or English crop, and most of the meadows, are now standing, while much that *is* secured was out from three to ten days in the process of curing. The haying season has been one of care and anxiety to the farmer; he could not secure the crop, and he could not leave it to engage in other labor, so that the cost of securing what he has got has been double of that necessary in good weather. Hay will be abundant, but the quality inferior

compared with that laid up in dryer and warmer seasons.

It is not intended as a compliment to New Hampshire, I suppose, when it is said that it is a good State to emigrate *from*. Better would it be for thousands who stray to regions of gold, or even to those of less glitter and pretension, if they would settle in New Hampshire and feed cattle upon a thousand hills, or cultivate its rich valleys, or rear hardy and intelligent boys and girls to become the future glory and strength of their country. I meet no more sensible, independent and hospitable people anywhere than I find in the Granite State,—and if there is any scarcity of the gentler sex in the Bay State, I commend the girls up here to the respectful consideration of those young bachelors who are seeking a yoke fellow "down in your parts." SIMON BROWN.

Joel Nourse, Esq.

RESTORATION OF EXHAUSTED SOILS.

The term, *worn out soil*, is of common use, and still no such soil ever existed. Any soil which has ever been fertile, is capable of being rendered so again, and without the addition of any new material, but only by altering the condition of the soil's constituents, by presenting conditions analogous to those which Nature has always used to render soils fertile. All soils are made up of *powdered rocks*, rendered fine by the various operations of nature, and composed only of the constituents of rocks and such other deposits as under peculiar circumstances may be received from the atmosphere—such as carbon, from its solidification in plant life by the decomposition of carbonic acid gas taken from the atmosphere, intermixed with which it is held in suspension.

Neither the presence, however, of all the primaries required for plant life in a soil, nor indeed of all the primaries in nature, will insure plant-growth. The *condition* of these primaries, and not their presence alone, is necessary to successful vegetation. When portions of the earth's crust, known as soil, have been many times in plant form and return again to the soil, then those portions are rendered capable of forming parts of such vegetable growths as men and animals now require, and when these are removed from the soil by the continuous removal of crops, it will then cease to be fertile until new portions are progressed by the same or other means. At the same time all may know by the help of the chemist, that the constituents of many soils, for the time barren, are the same as those of fertile soils, by name, but differing only in condition. The whole soil, from the earth's surface to the undecomposed rocks below, as a rule, contains the constituents of plants, and therefore cannot be said to be *worn out*, but requiring the *progression* of a portion of these constituents, viz., an alteration in condition, before they are available to plants.

Considering the earth's surface then as an endless or inexhaustible source of raw material, from which plants may be created, it only remains to ascertain the means of placing these raw materials in proper condition for assimilation, and we have a method for restoring what are usually called *worn out soils*. What changes must occur in the particles of the soil to produce the necessary changes in condition, so as to insure their appropriation in plant life!' It is evident that at least these particles must be rendered soluble in water; thus silex is only soluble after its chemical combination with an alkali, and indeed every constituent requires some change before it can be used as the food of plants. Let us see what probably occurs in fallow soils, or those bearing no crops: the circulation of atmosphere between the particles, (and there can be no chemical changes without such condition) deposits upon the cold surface of every particle a thin film of water, which being thus extended, takes up carbonic acid, increasing its power as a solvent, and by dissolving minute portions from the surfaces of particles, open these prison houses and permit new constituents to be affected in turn by new potions of carbonated water, which upon the receipt of each ingredient thus freed from their resting-places, is rendered capable of freeing another by chemical change, until in course of time the land contains a fair proportion of its own constituents in a progressed condition. All this progressed plant-food is slightly soluble under certain circumstances, and in this way bare fallows, as they are called, imitate vegetable growth by progressing plant constituents. Do we not see this operation continuously going on in nature? and should not the art of the Agriculturist be to avail of such natural laws as are applicable to fallows in a more rapid manner? We claim that this may be done so as to cause a single year to represent the effects of a century; every particle of soil, if viewed through a microscope, imitates in appearance the rock from whence it came, and its analysis will show the same constituents; nature's laws debridised the rock and gave us the particle, it becomes our business to facilitate the continuation of the operation of these laws on the particle, to insure its still further division and consequent exposure and change of condition of its constituents.

Some of the so called barren soils of Massachusetts being coarse pebbles and gravel, contain the same primaries as do the fine soils of the Miami Vally, but are the conditions of these constituents alike? And will the ordinary analysis offered by chemists who are incapable of recognizing these conditions, show any difference between the two soils, the one fertile the other barren? Will a cabbage grow upon a granite rock? And does not this rock contain all the inorganic constituents required by the cabbage? Will it grow in the powder of this rock, if finely ground, until after it has been exposed to atmospheric influence and proper state of humidity for so long a time, as to free portions of its constituents and progress them for plant use? Would not the powder of the granite rock placed immediately over an under-drain exhibit these conditions in a single year? We answer yes: and we say fearlessly that many soils which are comparatively barren for want of progression, may be rendered fertile by thorough draining and subsoil plowing, if left in bare fallow, but that until a portion of the constituents be so acted upon, the continued change will be comparatively slow,

hence the necessity for adding to soils suddenly placed in a condition for restoration, such materials as fertilizers, as will furnish all that may be required by the growing crop if to be removed from the surface. Under such circumstances the progressed portion, freed from the particles of soil, are not removed by the crop, while the process of growth materially hastens the continued development; the amount of moisture and gases sent coursing from the soil into and through the plants, causes the reception by the earth of new portions from the atmosphere, while the decay and solution of the roots of plants in the soil leave new openings for atmospheric ingress and ensure the deposit of the primaries yielded up by the decay of the roots. Therefore, we say that worn out soils may be restored in degree by continued or frequent disturbance; the restoration will take place to a still greater depth and much more perfectly, as well as in much less time, by under-drains and sub-soil plowing, even with a bare fallow surface; still more rapidly if crops be grown upon the surface and plowed into the soil; more rapidly still, where well chosen fertilizing materials are used to supply the wants of current crops, so that the soil may aggregate quantities of progressed pabulum, as have the soils of the Miami Valley compared with those soils of Massachusetts which are barren, although having the same constituents differently conditioned.

From whence came the soils of the Miami Valley? Have they not been deposited by water courses, after having been brought from the surface of particles as fast as freed by the processes we have before enumerated? Has not every particle of this finely divided soil in turn been exposed to the atmosphere, to moisture, to carbonic acid, and to contact with every other constituent of soils, so that it has availed of all Nature's laws, chemical or otherwise, and the whole mass may now be viewed not only as a more perfect mechanical debridation of such soils as those as are barren in Massachusetts, but also as the representative of the progressed condition consequent upon all changes which natural law is capable of producing?

From what we have said, can it be difficult for any farmer to choose a method for the restoration of soils? If his means are adequate let him under-drain, thoroughly sub-soil and surface-plow to the required depths, and add fertilizing materials chosen from the more progressed sources to supply his crops, while his soil is rapidly augmenting in value. If he is located in a part of the country where the market demands nothing but special crops, then let him use less amount of fertilizing material and plow under a variety of quick growing crops, so that all the pabulum elevated from the sub-soil may be deposited in the surface-soil for future use, and continue this treatment for one or more years, until his soil is capable of raising maximum quantities of the special crops his market requires at a minimum cost; the after culture of such soil will be less expensive than that of a merely ordinary good soil, while for all time his heirs will benefit by his judicious commencement.

Farmers who have not sufficient capital for such outlay, must be content to benefit in degree, by adopting so much of the truths we have set forth, as within their means; they should first be sure to locate where the requirements of the soil are within their ability to perform all the necessary manipulations, and to supply the necessary constituents; thus a farmer without means for under-draining and subsoil plowing, cannot locate on a clay farm with profit, nor can he cultivate a more sandy soil with equal profit, with him who can avail of these appliances. He who plows a clay soil not underdrained, to the depth of only six inches, and who uses no fertilizing materials but those made upon his farm, voluntarily places himself in a position to be the slave of his store-keeper. Let those who would repudiate these doctrines, read our articles on "Underdraining" and "Subsoil Plowing," and they may learn that there are farms where drought is never felt; where meadows never run out; where blight and disease are less frequent; and that in no case where the drains are properly constructed has the investment ever proved unprofitable.—*Working Farmer.*

OVER-EATING.

How many people eat to make it even. All the butter is gone, but the bread is not quite eaten, so another piece of butter is taken; but it was too much, and the bread has given out!

How many a time has the reader eaten some remnant on his plate, not because he wanted it, but to prevent its being wasted! How often have you eaten as much as you wanted, and were about pushing back from the table, when very unexpectedly a new dish, or splendid-looking pudding, dumpling, or pie, is presented, and you immediately "set to," and before you are done, have eaten almost as much bulk as you had done before.

Many a time have you gone down to the table, not only without an appetite, but with almost a feeling of aversion to food; and yet you tasted this, and that, and the other, and before you were aware of it, you had "made out" a considerable supper!

All these practices are wasteful, hurtful and beastly—no, we recall that; we are doing Mr. Pig an injustice; for, like all other respectable animals, when he "is done," he "quits"—a thing which rational man seldom does.—*Hall's Journal of Health.*

INVERTED POSTS.

In the May number of the *Farmer* appears one of those singular productions—the fruit of imagination—that are sure as the Lake tides, (which I am informed do occur,) to find their way into the publications of the day. "Ashfield Farmer" informs us that he was induced to try the plan of inverted posts and stakes, and that he soon had occasion to inquire why the top end of stakes should rot so much quicker than the butt. There was no difference in favor of or against inverted posts. What made the difference in the stakes and none in the posts?

Now whatever the conclusions deduced by the "Ashfield Farmer" from his experience and observations, my own conclusions, after the careful observations of a long life-time, are decidedly *in favor of inverted posts.* Let me mention one fact: In 1802, my father, then a resident of Taun-

ton, Mass., having occasion to set a pair of barposts, cut a swamp white oak of proper size to split, and set one of the halves in the ground, upright, as it grew, and the other inverted. The result was as follows: Some thirty years ago, I helped my father replace the upright one with a chestnut post; which, also, some three years ago when I visited Taunton, had given place to one of cedar; while the inverted post was apparently as sound as forty years ago.

The same has also been observed of wood stacked up to season; the inverted will be well-seasoned, while the other is heavy and inclined to rot. I have examined many stakes in Iowa and Wisconsin, and have always found the inverted stakes in the soundest condition, and believe ninety-nine out of a hundred reasonable men, who will take the trouble to examine such as have been set five years or more, will become converts to the inverted system, the "Ashfield Farmer" to the contrary, notwithstanding. So thinks ZINA ROUND. *Nevada, Wis., May*, 1858.—*Wis. Farmer.*

For the New England Farmer.

ABOUT MR. MECHI'S FARMING.

BY HENRY F. FRENCH.

"Mr. Sheriff Mechi"—as he is pleased to write himself down on the title-page of his pamphlet, "How to farm profitably, particularly on heavy clays"—Mr. Sheriff Mechi has his farm of 170 acres, all underdrained with tiles, all also underlaid with iron pipes, at "Tiptree Hall," in Essex county, in the southeast part of England, about forty miles from London.

Mr. Sheriff Mechi drains his land from four to five feet deep, and then by help of a cistern of 80,000 gallons, and a steam engine, irrigates his green crops in summer, by forcing liquid manure into each field through the iron pipes, and distributing it by means of hose over the growing rye, grass, clover, beans, vetches and turnips. The sheriff is not such a blockhead as to suppose that draining and irrigation cannot be necessary on the same land. Taking out the cold water in spring, and putting on water in dry times, seems to him as consistent as it does for a man to drink in a hot summer day, though he may have got out of the river when he fell through the ice the winter before.

Mr. Sheriff Mechi raises about 40 bushels of wheat, 56 bushels of barley, and 88 bushels of oats to the acre, as he states, no doubt with truth, for average crops.

I had an introduction to Mr. Mechi, in London, last summer, and I visited Tiptree Hall, and I afterwards had the pleasure of seeing the "Sheriff of London" rolling through the city in his coach, in splendid state, with horses and footmen blazing with gold, and I had the curiosity, also, to peep into his shop, where he made his fortune by his trade of manufacturing dressing-cases and the like.

The Sheriff is "a good fellow" every way, full of life and kindly feeling, a good sheriff, no doubt, and a good farmer. He is one of the very few, who rise from low condition to be the companions of Lords and Nobles, in old England, and he has done it by having in him a good deal of what we call "go ahead."

The land at Tiptree Hall was a hard, sterile, water-logged clay, for the most part, and Mr. Mechi has brought it by "high-farming" to the height of productiveness. He says, "As a general estimate, you cannot effectually improve stiff land under £25 ($125) per acre; your drainage will cost you £6 ($30,) fallowing, levelling, subsoiling, &c., £7 ($35;) a good heavy manuring, £7; lime or chalk, £5."

Will this sort of farming pay? Mr. Mechi says it does pay him, and he enunciates this as his principle, that "*whatever does not pay in agriculture is not an improvement,*" and he shows by his balance sheet, with carefully kept accounts, that his farming pays handsomely.

Will such farming pay in New England? I think it will not, at present prices of labor and produce. Produce is higher and labor much lower in England than in America, and this makes the difference which men who insist upon our copying English farming, without understanding it, overlook. Mr. Mechi's example is constantly held up for our imitation, as if it followed of course, that what is profitable there must prove so here.

Now, professing myself an advocate for "high farming" and *deep* farming, and especially for draining, which is Mr. Mechi's first commandment, I cannot see my way clear for underlaying my farm with liquid manure pipes in this cold country, where nature imposes many obstacles unknown in the south of England.

A few figures will show where Mr. Mechi would find his balance, if we substitute American prices of labor and products, instead of English prices.

On the very soil at Tiptree Hall, I inquired of laborers and of the steward the price of labor there. The answer was nine shillings ($2,25) a week for a man's labor, the laborer boarding himself. The "Encyclopædia of Agriculture" states the price in 1850, in Essex county, at from eight to ten shillings, and so confirms these statements.

Mr. Mechi states the "gross expenses, per acre, on the whole farm," to be, reduced to our currency, $38,54, of which the items of labor amount to $12,87.

Now, if we call the price of labor here 93¾ cents per day, we have it just twice and a half as much as at Tiptree Hall. Then call the labor per acre, twice and a half $12,87, which is

$32,18, and we have the difference of $19,31 to be added to his "gross expenses per acre," which will make $57,85 instead of $38,54, as the cost of bestowing the same labor here that Mr. Mechi bestows there.

Now, to show that it wont pay to spend $57,85 per acre even for such crops as Mr. Mechi produces, let us try the value in the New York market of his best crops. Wheat, barley and oats are the profitable standard crops that bring in the money in England. They are called *white* crops, and rarely are raised twice in succession on the same field. A *green* crop of turnips, clover, rye, grass or the like, usually follows a white crop, so that when we estimate the value of the wheat, barley and oat crop, we give far more than the average value of all the crops. Taking Mr. Mechi's crops as he gives them, and the prices from the New York *Tribune* of August 14, 1858, we have:

40 bushels of wheat at	$1,25	$50,00
56 bushels of barley at	65	36,40
88 bushels of oats at	50	44,00

We have seen that if Mr. Mechi paid American prices for labor, each of these crops would cost him $57,85, and if he sold them at American prices, he would soon be seen coming out of the smallest end of the horn, instead of being Lord Mayor of London, as we hope he may be in due time.

This is written, not to discourage good cultivation, but to show the folly of following English leaders in agriculture, blindfold.

Mr. Mechi includes in his expenses, tithes, church rates, rent of land, and the little items, which we have nothing to do with. We may make less or more money than he, by investing largely in improvements, but there is no parallel between us. We pay the laborer his full share of the profits, often more. In England, he gets only enough to keep him from starving. There land and its products are dear, while here both are comparatively cheap.

Good farming, intelligent farming, in both countries, will show a good balance sheet, but Mr. Sheriff Mechi's accounts need some "variation for this latitude" and longitude. We may do as well as he is doing, but not in the same way. He does not state the price he pays for labor, by the day or week, but he gives such items as this, which shows how well the laborer fares:—"Cutting drains in stiff, tile clays, 4 feet deep, at per rod or pole, including placing the pipes, 5½d." About eleven cents per rod for cutting a ditch 4 feet deep in stiff clay, and placing the drain pipes! If any laborer wants a job, at double that price, I should like to have him call on me, at the Pines. I believe draining will pay me at double such prices, but some of Mr. Mechi's improvements would soon ruin me.

There is nothing in which American farmers, especially in New England, err more than in withholding capital from their legitimate business. Judicious improvements to make the crops large and uniform, to put them beyond the common risks of wet and dry seasons, will pay better than banks and railroads. Thorough draining, deep culture, and heavy manuring, with attention to proper rotation of crops, will make farming profitable, on almost any land, near good markets.

Exeter, N. H., August 16, 1858.

NECESSITY OF PURE AIR.

Whatever makes the air impure makes the blood impurer. It is the air we breathe which purifies the blood. And as, if the water we use to wash our clothing is dirty, it is impossible to wash the clothing clean, so if the air we breathe is impure, it is impossible for it to abstract the impurities from the blood. What, then, are some of the more prominent things which render the air impure? It is the nature of still air to become impure. Running water purifies itself. Air in motion, draughts of air, are self-purifiers. Thus it is that the air of a close room becomes impure. Thus it is that close rooms bring consumption to countless thousands. Hence all rooms should be so constructed as to have a constant draught of air passing through them. A man of ordinary size renders a hogshead of air unfit for breathing, and consumes its blood-purifying qualities, every hour. Hence sleeping in close rooms, even though alone, or sitting for a very short time in a crowded vehicle, or among a large assembly, is perfectly corrupting to the blood. Close bedrooms make the graves of multitudes.—*Hall's Book on Consumption.*

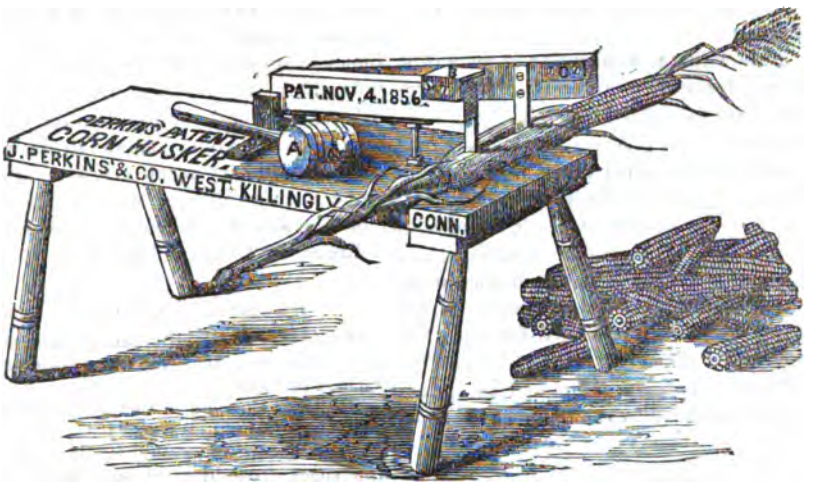
MEN AND BOYS.

There is a real distinction between these two classes of persons. They are not unlike simply as to size and strength, but also as to higher qualities. A true man is manly, a boy is naturally boyish. "When I became a man," says Paul, "I put away childish things." Some individuals, however, in the shape of men, are as little given to reflection—as indiscreet and simple, as if they wore the shape of children.

Boys are designed to be men, and men they will become, if they are properly trained and educated, and do themselves justice, but if not so trained and educated, and are reckless, they will only grow into large boys.

It is in this case much as it is with tadpoles. These are meant, naturalists tell us, to be frogs. The Creator so intended them. But if shut up and excluded from the light, they will never lose their tails and become frogs, but remain mere tadpoles.

Thus many boys never become men. They continue boys in intellect, judgment and deportment—shrunk, dwarfish and paralyzed,—inseparably allied to "childish things." "Show thyself a MAN," by eschewing whatever is puerile and belittling.—*Religious Herald.*



PERKINS' CORN HUSKER.

We have long since ceased to entertain any very strong doubts that husking corn, or any other work, may not eventually be assisted—if not entirely accomplished—by the aid of machinery. But as relates to most of the operations on the farm, we look upon that of *husking* to be among those presenting many difficulties to be overcome. There is no trouble in separating the ear from the stalk, but in most cases it leaves it with so many manipulations to be performed afterwards, that it is doubtful whether anything has yet been gained by the use of machinery in this item of farm labor.

Within the last twelve months we have looked at half a dozen different contrivances for husking, with considerable interest, but have found nothing among them all, not fairly liable to pretty serious objections.

The machine which is figured above, we have only seen in operation in a very limited degree, and cannot now, therefore, do more in presenting it to our readers than to allow its inventor to speak for himself. He says:

"This machine will husk corn of any size, on the stalk, just as cut from the ground.

The operator, seated on the machine, holds, *with the left hand*, the ear under the cutters, and with the mallet, *A*, *in the right hand*, striking the short lever, *B*, *downwards*, cuts the ear close to the first row of kernels, (the cutters being in contact or close together when they descend,) then striking the long lever, *C*, *outward*, the ear is pushed entirely out of the husk, being but two motions—first, *downward*, second, *outward*.

It husks as fast as the stalks are placed under the cutters; and from 50 to 100 per cent. more corn can be husked per day, with this machine, than by hand, and all severe and painful hand-labor entirely avoided.

The iron work is of wrought iron, and the machine is warranted not to break by fair usage.

Size of machine.—Height, 16 inches; length, 28 inches; width, 9 inches; and weight 17 lbs."

It is made by J. PERKINS & Co., West Killingly, Conn., and sold, singly, for $5,50.

For the New England Farmer.

EVAPORATION.

It has been very generally considered that the evaporation of any fluid is a cooling process—that is, that vapor always takes heat from, and consequently leaves cooler, the body which generates it; but is this so in reality? Let us examine for a moment the experiments usually cited in confirmation of this theory; the first of which is, the placing of alcohol on the hand and letting it evaporate by the natural warmth of the body. In this experiment, it is true that the hand will feel cold, but does not this prove that a certain portion of caloric has left the hand and united with the alcohol, making it in fact *warmer*, instead of colder? The second experiment cited is that of the Spanish alcarrazas, which consists in placing water in a porous earthen jar, either in the sun or in a warm, dry atmosphere, where evaporation will take place with great rapidity? By this means water, it is said, may be cooled to quite a low degree of temperature. I am not prepared now to say that this may not be so, but yet it is a question of some doubt, as the reader will see, by attention to the result of the following experiment, which was performed a short time since by

Mr. J. H. Shedd, of this city, for the express purpose of testing the accuracy of commonly received opinion upon this subject.

A jar wrapped in several folds of flannel was filled with water at 66° Fahr.—the flannel on the outside of the jar was completely saturated with water at the same temperature and the whole was then placed in the sun when the themometer stood at 126°; evaporation took place with great rapidity, so rapidly in fact that the wrapper required to be re-wet several times in the course of the hour during which the experiment was continued; the water used for wetting the wrappers was always of the same temperature, viz., 66°, and could have had no effect in raising the temperature of the water in the jar; yet at the expiration of the hour its temperature was 81°—that is, 15° higher than at the beginning of the experiment! Not doubting in the least the accuracy of this trial, as it was performed by a gentleman who is well known to be careful and exact in performance, the trial was repeated in the following manner. One end of an ordinary porous drain tile was closed, and the tile then filled with water at 71°; this was not placed in the sun, but in such a position that it was constantly subjected to a draught of air at a temperature of 72½°: the water soon saturated the porous sides of the tile, and evaporation took place so fast that in the course of three hours a tenth part had been vaporized; yet the only change that had taken place in the temperature of the water had been to raise it, in the beginning of the experiment, 1½°, that is, to 72½°, the temperature of the atmosphere; having gained this point, it remained constant throughout the entire time of the trial.

It is possible that in making these experiments something essential to their successful operation may have been omitted; if so, it is hoped that some one of the many intelligent readers of the *Farmer* may correct our errors, and at the same time throw more light upon this portion of the theory of evaporation.

Though evaporation, *per se*, may not be a cooling process, yet no one can doubt that through this medium wonderful changes of temperature are effected; and still more wonderful and even fatal changes are prevented.

In the whole economy of nature there is no more beautiful phenomenon than this;—annually the earth in its mighty respiration sends forth and draws back to itself one hundred and sixty millions cubic miles of vapor. To this flow of the earth's breath of life we owe our majestic rivers and ever flowing springs; the beauty of the sunset filling the heart with calm, quiet joy, the vanishing tints of the rainbow, ever reminding us of God's saving promise, are but the fulfilling of its mission to men. PENSA.

Boston, Aug., 1858.

THE HEAVIEST BULLOCK EVER BUTCHERED.—Upon the authority of the President of the American Institute, it was recently stated that the heaviest bullock butchered in this country was the ox Washington, whose gross weight was 3,204 pounds, and weight of beef 2,174 pounds. This claim appears to be disputed, however, by some writers in the *Tribune*, from Pennsylvania, one of whom claims that a bullock was butchered near Lancaster, on the 22nd of February last, whose live weight was 3,387, net, 2,409; the other that a Berks county ox was butchered some years ago in Philadelphia, whose live weight was 3,350, net 2,388. A still heavier bullock is announced in the *Saratoga County Press*, which says "that J. M. Cole, of Saratoga Springs, slaughtered an ox in 1847 whose live weight was 3,520 lbs.; dressed 2,567." If this be true, Mr. Cole has probably beaten the world, and should give the world the proof.—*Southern Planter.*

INQUIRIES ABOUT WHITE CATTLE.

ED. CULTIVATOR:—Permit me to ask you or some of your readers a few simple questions:

1st. Will white cattle stand our cold winters as well as cattle of other colors?

2nd. Does the color make any difference about their standing the heat, when worked hard in warm weather?

3d. Does the color affect the quality of beef?

4th. Would it not be better to bring our cattle from the north as much as possible, than from the south; would they not stand our winters better?

I would like to have these questions answered, as I am rather partial to white cattle, and I would like to know whether they are as hardy as cattle of other colors? Yours truly, H. C. B.

ANSWER.—More than thirty years ago we worked a yoke of white oxen through a heavy season's plowing, and though, in the abstract, they stood heat better than dark cattle, yet their general tenderness led us to turn them to beef as soon as possible. Our experience with white cows is also unfavorable to their profitableness. But these were not the blood stock. We shall be glad to have the experience of those who have kept the white full blood short horns.—*Ohio Cultivator.*

POWER OF ABSORPTION.

It is a fact well known to physiologists that the power of absorption of nutritious matters depends upon the fact that the blood in the capillary vessels which surround the intestines is thicker than the fluid contained in the intestines. Water is absorbed in great quantity and rapidity into the blood from the intestinal canal. The blood would thus soon become so diluted as to be incapable of further absorption, if it were not for certain arrangements for the rapid escape of this water from the body. A part of the water passes off by the kidneys. Thus, if a man drinks five or six tumblers full of ordinary well or spring water, the major part will be excreted by the kidneys in less than thirty minutes. But, besides this, the evaporating surface, including the cutaneous and respiratory, is immensely large as compared with the absorbing surface. According to Lindenau's calculation, the whole absorbing surface of the intestine is 24 square feet, while the evaporating surface of the lungs is 2,642 square feet and that of the skin is 12 square feet. By this wonderful contrivance any undue increase of water in the blood is soon got rid of, and the due thickness of the blood, and of consequence its powers of absorption, are constantly maintained. —*Louisville Journal.*

For the New England Farmer.

A FINE FIELD OF POTATOES—DIGGING AND PILING MUCK.

MR. BROWN:—*Dear Sir,*—I have been much interested to-day in viewing a field of ten acres of potatoes. All things considered, the field is a sight worthy the observation of any man at all interested in the cultivation of land, and I think may well receive a passing notice in the *Farmer.*

The land is part of a tract of upland pasture, heretofore closely fed by village cows, and in ordinary condition. The soil is a yellow loam, somewhat mixed with cobble stones in places, but for the most part tolerably free, and easy to work. Early in April last, the land was plowed, harrowed, and furrowed out one way, in rows three and a half feet apart. Then it was manured in the hills, with a compost of muck and ashes,—using, in all, an hundred loads of compost, putting a shovelfull in each hill. The hills were made three feet apart in the rows. The potatoes were dropped immediately upon the compost, and the planting done between the fifteenth and twentieth of April.

The muck was dug from the swanp two years ago this summer, and placed in a heap on dry ground, to dry and become rotten and fine. A week or two previous to planting, it was drawn upon the field and placed in four heaps, of twenty-five loads each, at convenient distances for reloading and dropping into the hills; and three bushels of unleached ashes were mixed with each cart-load of the muck, as it was being deposited in the heaps. After lying a few days, the compost was shovelled over, and then it was ready for use.

The potatoes have from the first been very thrifty and of stout growth. The tops now stand about three feet high, and spread out laterally so as to touch from row to row and pretty much cover the ground; and they have a deep green color and perfectly healthy appearance every way. The potatoes are already of good size for cooking, and promise a good yield,—indeed, they are now daily prepared for the table. Any one, observing the perfect and large growth of the crop, and considering the previous condition of the land, must conclude that the compost of muck and ashes is a valuable manure. My observations to-day so forcibly remind me of the value of muck, that I can not forbear again urging its preparation for tillage purposes, notwithstanding that I have heretofore in the *Farmer* said so much upon the subject.

August and September are generally the most favorable months for digging muck. Now then is the time to get it out of the swamp and pile it upon dry ground, in heaps accessible at all seasons. It is always a convenience to have such a deposit of vegetable matter to draw from, there are so many ways in which the muck can be used in the making of manure and cultivation of crops.

The older the muck before using it, the more marked its good effects upon the crops. By lying a year or two in a heap upon dry ground, the muck becomes dry, rotten and finely pulverized; the action of sun, frost and decomposition in a good degree takes out the acids; the muck is lighter and freer to shovel, cart, and handle any way; it will be a more perfect absorbent of the liquids and salts of manure; and may be used in larger quantities, in proportion to the manure, lime or ashes it is composted with, than would be proper or profitable if it were taken directly from the swamp, in a green, raw state. Therefore, if one can let his muck lie in heap two years before using, it will be enough better to richly pay the investment; and it certainly ought to lie several months, at least.

If the swamp is not dry enough to get the muck out handily, now is the favorable period for opening ditches to drain it. If it is inconvenient or undesirable to drain the entire muck-bed, then by ditching around a piece of it, of a few rods square, and extending an outlet ditch, of suitable depth, to ground low enough to carry off the water cleanly, the body of muck so separated on all sides from the main bed, will in a very few days drain off sufficiently to be easily shovelled up and carted out to dry ground. Where one designs to get out a considerable quantity of muck, he will find it to be in the end the best economy to drain at least that portion of the swamp he is to take the muck from, clear to the bottom. A more temporary and superficial arrangement will not generally be any saving of labor. F. HOLBROOK.

Brattleboro', Aug. 17, 1858.

TIMES GO BY TURNS.

An English Jesuit, Robert Southwell, wrote the following lines of much merit, two centuries and a half ago. The philosophic strain pervading the piece is worthy of admiration.

The lopped tree in time may grow again,
Most naked plants renew both fruit and flower;
The sorriest wight may find relief from pain,
The dryest soil suck in some moistening shower.
Times go by turns, and chances change by course,
From foul to fair, from better hap to worse.

The sea of fortune doth forever flow,
She draws her favors to the lowest ebb;
Her tides have equal times to come and go,
Her loom doth weave the fine and coarsest web.
No joy so great but runneth to an end,
No hap so hard but may in time amend.

Not always fall of leaf, nor ever spring;
No endless night, nor yet eternal day;
The saddest birds a season find to sing,
The roughest storm a calm may soon allay.
Thus with succeeding turns God tempereth all,
That man may hope to rise, yet fear to fall.

A chance may win that by mischance was lost;
That net that holds no great, takes little fish;
In some things all, in all things none are crossed;
Few all they need; but none have all they wish.
Unmingled joys here to no man befall:
Who least, have some; who most, hath never all.

TREES.—I remember that, riding one day in the south of Spain, where plains and hillsides have been thoroughly denuded of trees,—except the poor, homely, shadeless olive,—my intelligent guide pointed to a huge ring, or bolt, in the side of a rock, as our horses were picking their way through the dry, rocky course of a once deep river. "There," said he, "the old Romans used to make fast their galleys when they ascended this river."

The forests have now gone, and with them this once navigable river, which flows only in the winter, and there is but a shallow stream. —*L. Saltanstall.*

ROTATION OF CROPS.

Manuring has been aptly denominated the moving power in agricultural enterprises—the steam engine which propels the vessel,—and if so, a proper and judicious succession or rotation of crops may be considered the rudder which guides or directs its course.

We have not, in this country, any general or common system of rotation, and have as yet made but a remote approximation to the accuracy which characterizes the movements of agriculture in Great Britain, Germany, and many other European countries, where the art of agriculture has been longer practised, and where its laws are better defined and understood.

The courses which have been most generally introduced, are the following:—

I. 1st year, corn and roots well manured; 2d year, wheat sown with clover, 15 lbs. per acre; 3d year, clover one or more years, according to the fertility and amount of manure at hand.

II. 1st year, corn and roots with all the manure; 2d year, barley and peas; 3d year, wheat sown with clover; 4th year, clover, one or more years.

III. 1st year, corn and roots with all the manure; 2d year, barley; 3d year, wheat sown with clover; 4th year, pasture; 5th year, meadow; 6th year, fallow; 7th year, wheat; 8th year, oats sown with clover; 9th year, pasture or meadow.

It will be noticed that in each of these three courses, the number of fields corresponds with the number of changes—the first is three, the second four, and the third nine. As to the practicability of rendering a thorough and complete course of rotation economical at first, on our farms, there may be some question; yet that the system is philosophically predicated, and susceptible of successful adoption, under favorable circumstances, is quite probable. A principal objection will be found as existing in the extra extent of fencing required in subdividing the farm properly.

Another objection would be found by us in *the year of rest* which the soil finds in the nine-course system; that is, leaving the fields *fallow*, or in furrow, and perhaps, plowed two or three times in the course of the year, when it recuperates, not only by not being cropped, but being mellow and porous, draws largely from the enriching influences of the atmosphere, and is thus enriched for future cultivation. In fallowing, therefore, a considerable portion of the labor required for a crop must be performed without any present return whatever.

The soundness of this practice is generally questioned in this country, but probably upon no better data than vague supposition; as we have never known of a single experiment as a test, nor seen one related. The English people have brought the art of cultivating the earth too near to a system, and are too critical and observing, to continue a practice of this kind through a long series of years, unless it were based on some sound principles of utility.

We hope some of our farmers, such as Mr. Fay, of Lynn, Brown, of Marblehead, Waters, of Beverly, Sutton or Ayres, of Salem, and many others who have extensive farms, will make careful experiments on this point, and let the result be known.

One thing with us is certain, and is acknowledged by all, and that is, *that we occupy too much land*—that the same manure now used, spread on a less quantity of land, would produce far more favorable results,—and when we feel that we cannot spare the land for the year of *fallows*, or *rest*, we must remember that the English people occupy less land and manure much higher than we do, and therefore, can better afford to let a portion of their soil rest.

For the New England Farmer.

CULTIVATION OF WINTER WHEAT.

Mr. Brown:—*Dear Sir*,—Happening a day or two since to meet my townsman, Rufus Clark, Esq., he remarked to me that he had been interested in the several articles in the *Farmer*, by your able correspondent, Mr. Poor, upon the subject of raising winter wheat in New England; that, in consequence of Mr. Poor's suggestions, he in the fall of 1857 sowed an acre and a half with winter wheat; and having succeeded in raising a good crop, he would like to show it to me. I therefore called at Mr. Clark's place to-day, to see his wheat, and gather the details of its cultivation. I present the results to the *Farmer*.

The land that produced the wheat is of about an average quality with the rest of Mr. Clark's tillage land, and has had no extra cultivation above his other fields. In 1854 it was manured broadcast and planted with corn, and that Fall sowed with winter rye, and stocked the following Spring with clover and herdsgrass. In 1855 the acre and a half yielded twenty-one bushels of winter rye. In 1856 and 1857 the piece was in mowing, yielding good crops of mostly clover hay.

The first week in September, 1857, the acre and a half was plowed up, and manured with a compost made of muck and leached ashes, spreading it on top, about at the rate of fifteen ox cart loads to the acre, and harrowing it in with the wheat. The muck used had lain one year in a heap in the barn-yard. Just before applying it to the wheat land, about four bushels of leached ashes were mixed with each load of muck. On the 12th of September two and a half bushels of winter wheat were sown on the acre and a half; and early this Spring it was stocked with grass seeds.

The first week in July last, the grain was cut and stooked, and made sixty stooks, of twelve

bundles to the stook. The heads of wheat are of good length, and the berry plump and fair, with no injury from insects of any kind. The straw stood about breast high, perfectly bright and free from rust or blast.

I have examined the crop in the barn, both threshed and not threshed, and am pleased with its appearance. A small portion has been threshed, and it would seem, judging from the grain obtained from a given number of bundles, and considering the whole number in the sixty stooks, that the yield would be between fifteen and twenty bushels to the acre. There is no reason to doubt but what more bushels of winter wheat have been grown on the piece this year than it yielded of winter rye three years ago. It is proper to remark that there was a good catch of grass with the wheat.

Now this is not an extraordinary crop, which other farmers could not hope to equal. But it is a good crop, of winter wheat too, and encouraging to others to try and do likewise. Mr. Clark's crop goes to confirm the correctness of Mr. Poor's advice to New England farmers, to attempt the raising of winter wheat. F. HOLBROOK.

Brattleboro', Aug. 20, 1858.

APPLE PUMICE.

The general presumption is, among farmers, that *apple pumice* is an article utterly worthless. This, however, is a mistake. If, upon cutting down the cheese, the pumice be thrown into a close, compact heap, with a sufficiency of quick lime to neutralize the acidity of the mass, and allowed there to remain undisturbed until the following autumn, and then be shovelled over and mixed with a fresh supply of lime, or unleached wood-ashes, old manure, compost, or dry meadow mud, it will soon become one of the most salutary applications that can be made to apple trees, grape vines, or, indeed, to almost any species of fruitiferous trees or shrubs.

In its crude state the superabundance of acid which it contains, *(tartaric,)* renders it highly injurious, and not unfrequently fatal in its effects when applied to vegetables of almost every kind. A knowledge of this fact sometimes induces the spreading of fresh pumice around bushes which it is desirable to destroy, and the result is speedily secured. Elder bushes are often completely deadened down to dry wood, in a single season, by having the surface of the soil around their roots covered with a stratum of pumice four or five inches in depth. Bushes which are even more tenacious of life than the elder, rarely survive more than a year after the application is made. But it is more valuable as a manurial agent, and to this use should be appropriated.

In districts where lime cannot be easily obtained, a good process is to deposit the pumice in some low and convenient place, where it will not be liable to wash away, mix with it what wood-ashes is at hand, and then five or six times the amount of pumice, of old, well-dried meadow muck. Turn the mass over two or three times a year, and thoroughly incorporate the whole. Six months before using, cart to the heap a few loads of manure from the barn, mix it minutely, and the heap will be ready for use.

For the New England Farmer.

THE TRUE FOWL-MEADOW GRASS.

MESSRS. EDITORS:—The July number of your very valuable journal contains answers to questions proposed by me to the *N. E. Farmer*, no longer ago than May 28th, 1827. And as I was not expecting *just now*, to receive an answer, and having a press of business on my hands, (the *Monthly N. E. Farmer* being *always good for use,*) I did not notice the fact until this morning. My special acknowledgments are due, and are rendered to Mr. Wetherell, for his very interesting and instructive article, upon a subject of so much importance to farmers in general.

The lamented FESSENDEN, of the old series of the *Farmer*, was deeply interested in regard to this grass, (the *Poa nervata,*) and says, in closing his article upon the subject in Vol. 5, No. 45, June 1st, 1827, "We are not able to state the quantity of seed to the acre which should be sown for a crop of fowl-meadow, nor to give satisfactory answers to the other questions of Mr. Macomber, but would consider it as a great favor, if any person acquainted with the cultivation of this valuable kind of grass will answer his inquiries." But it so happens that by far the most satisfactory portions of Mr. Wetherell's article are, after all, contained in the use of the same quotations, from Dr. Elliot's third essay on field husbandry, and from Dr. Willich's *Domestic Encyclopædia*, and also from Dr. Muhlenberg; which appeared in Mr. Fessenden's remarks on the same subject more than thirty years ago.

Upon carefully reviewing Mr. Fessenden's remarks, we think Mr. W. will become convinced that Mr. F. did not say, as he supposed him to do, that, "this grass is called herds-grass, and white-top, at the South." But says Mr. F, "It is thus described in the second volume of the American edition of Willich's *Domestic Encyclopædia*, page 268;" and we do not understand Mr. Fessenden to affirm it to be so, any more than we do Mr. W. to affirm that which he quotes from others.

That Mr. F. was mistaken in some respects there can be no doubt; he answered according to his best information in '27, and Mr. W. has given us in some respects the same, together with the increasing light of '58; and the agricultural community can but be grateful that a grass of so many valuable qualities, is now so authoritatively and elaborately, as seen by the many writers cited by Mr. Wetherell, placed within their rightful power.

Mr. W.'s answer to my third question does not appear to have been understood, he having once for all said in answer, "it is not a salt marsh grass;" *that* we well knew from Mr. Fessenden's remarks, in '27. But will it answer provided *the soil is sometimes overflowed* by salt water? in the *exact language* of the question, is *quite another matter.*

Does Mr. W. know, that upon our rivers, situated somewhat remotely from the sea, we have large quantities of meadow, producing at the present valuable grass, known with us as blue, and black grass, mixed in with some of the English grasses, and that those marshes are *sometimes overflowed*, by means of salt water, which in meeting the flowing tide from the sea, is met itself by the fresh water from our inland river sources, and is of course thereby made brackish; but not so salt, as to prevent the growth of fresh grass? Very many acres of this kind of marsh exist upon all our sea-coast towns, which might be very much more productive of quantity, and very greatly improved in many other particulars, could the fowl-meadow grass take the place of very much, at least, of that which now covers it. It was to meet *this* view of the case, that the question was originally asked, and would still doubtless be of considerable service to quite a large interest, to be informed, on a subject of so much importance to them.

With many of us, surely, it is a matter of no trifling consequence to have a grass like this, which is said to produce its three or four tons to the acre; and at the same time, in case of sickness, want of help, or any other unforeseen event, be able to delay cutting it, even until October, without injury to the hay. CHAS. W. MACOMBER.

East Marshfield, July 24, 1858.

RAREY ON "BLINKERS."

Mr. Rary sends to the London *Times* his opinion of the use of "blinkers" on horses, as follows:

"All my experience with and observation of horses proves clearly to me that blinkers should not be used, and that the sight of the horse, for many reasons, should not be interfered with in any way. Horses are only fearful of objects which they do not understand or are not familiar with, and the eye is one of the principal mediums by which this understanding and this familiarity are brought about.

The horse, on account of his very amiable nature, can be made in the course of time to bear almost anything in any shape, but there is a quicker process of reaching his intelligence than that of wearing it into him through his skin and bones: and he, however wild or nervous, can be taught in a very short time to understand and not to fear any object, however frightful in appearance. Horses can be broken in less time and better without blinkers; but horses that have always worn them will notice the sudden change, and must be treated carefully the first drive. After that they will drive better without the blinkers than with.

I have proved by my own experiments that a horse broken without blinkers can be driven past any omnibus, cab or carriage, on a parallel line, as close as it is possible for him to go, without ever wavering or showing any disposition to dodge. I have not, in the last eight or ten years, constantly handling horses both wild and nervous, ever put blinkers on any of them, and in no case have I ever had one that was afraid of the carriage he drew behind him or of those he passed in the streets.

The horse's eye is the life and beauty of the animal as well as the index of all his emotions. It tells the driver, in the most impressive characters, what the horse's feelings are. By it he can tell the first approach of fear in time to meet any difficulty; he can tell if he is happy or sad, hungry or weary. The horse, too, when permitted to see, uses his eyes with great judgment. He sees better than we do. He can measure distances with his eyes better than we can, and, if allowed free use of them, would often save himself by the quickness of his sight from collisions when the driver would fail to do so by a timely pull of the reins. It would also save many accidents to pedestrians in the streets, as no horse will run on to any person that he can see."

For the New England Farmer.

CANADA WEST.

THE SEASON, PROSPECTS, ETC.

To many who are unacquainted with this country, its name is associated with the idea of a cold, ungenial climate, scarcely habitable by enlightened people. But a few minutes spent in examining a good map would teach them that almost the whole of Canada West lies between the parallels of 42° and 45° of north latitude. One-half of the State of Maine is farther north than Canada West, and the south-western portion of the Province is farther south than Boston; consequently it is in the same latitude as the greater part of New England, and we may reasonably imagine a similarity in climate. By several years' careful observation I find it to be so, only that near the great Lakes we have less snow, and more changeable weather in winter.

The soil is generally fertile and easy to cultivate, producing abundant crops. Wheat is the great staple, though in some sections that grain does not succeed so well as formerly. This is particularly the case in this county (Prince Edward) but great quantities of rye, peas, and barley are raised. Corn grows well, but as it requires more labor than grain, the quantity raised is small.

Although the price of grain is low, owing to our great distance from a good market, farms here sell from $30 to $50 an acre, according to quality and location, and for a much higher price in places farther west.

Spring opened early this year, and we have had some very fine weather, though subject to changes. The 9th of May the mercury rose to 70° in the shade, and in the morning of the 16th it fell to 34°. Some plowing was done the 3d month; the 4th month was milder—mean temperature in the shade 43.53°, which is 6° above that of the corresponding month last year.

We have had an abundance of rain, and grass looks fine. Vegetation of all kinds progresses steadily. Forests have assumed quite a vernal hue, and the fields have spread their green carpet. Wild flowers are abundant, and many a vase is crowned with a bouquet of these emblems of innocence and purity. The 18th of 4th month I found some flowers of the Bloodroot, (*Sanguinaria Canadensis,*) Liverwort, (*Hepatica Triloba,*) and of the beautiful Yellow Erythronium, (*Erythronium Americanum,*) which, with its lily-shaped flower, and clouded leaves, is among the earliest harbingers of spring, and is found in

New England as well as here, growing in rich earth beside fences, or in thin woods.

The prospect for crops is good, yet, owing to the open winter, considerable grain is winter-killed, especially on flat land. All kinds of fruit trees will bloom well, and this was the case last year, but apples were scarce. Considerable attention is paid to raising fruit, but old orchards are much neglected. A good supply of small fruit is raised here, though grapes are not so plenty as is desirable. I should be glad to try the Concord grape, if I could obtain a root; I do not know of one in this region. L. VARNEY.

Pictou, C. W., 5th Mo., 18th, 1858.

REMARKS.—We regret that this communication, with one or two others which we shall publish, was mislaid. We are always glad to hear from friend Varney, and shall be more careful with his next letter.

For the New England Farmer.

THE OAKES COW.

MR. EDITOR:—I have copied for your monthly journal a letter from the venerable JOSIAH QUINCY, which I accidentally found among my papers, to-day. The notoriety of the object about which he wrote, as well as the eminence of the writer, will secure the attention of many a gratified reader. In these days when objects of fancy are leading astray our judgments, let us be careful *not to rub out old land-marks*. If my recollection is right, in the volume of Agriculture for Massachusetts, as compiled by Mr. Secretary Flint, for 1854, page 280, will be found a portrait of this celebrated animal. I also think he said Col. Jaques, of Somerville, last owned her. If any doubt remains on these points, fortunately for the community, Messrs. Quincy and Jaques, both "still live"—although verging close on 90 years. Very truly yours,

May 11th, 1858. J. W. PROCTOR.

[COPY.]

SIR:—The subject of the Oakes Cow has been out of my mind for at least *thirty-five years*. I bought her for my farm use, (in 1816, I believe;) her milk produce was satisfactory to my farmer, but neither her milk nor her butter were kept distinct from what my other cows produced. I regarded her as a very good cow, which by high feeding, and special attention, might be made to produce an extraordinary quantity of milk. I raised no calves from her, and had no knowledge of her origin, and have no recollection what became of her. Yours respectfully,

JOSIAH QUINCY.

NOTE.—In the 4th volume of Agriculture of Massachusetts, is a specification of the product of the Oakes cow, viz.:—484½ pounds of butter in one season, besides one quart of milk a day for the use of the family.

AGITATING PLANTS.—It is a remarkable fact, according to "the chemistry of the world," that trees which are regularly shaken every day in the green-house grow more rapidly and are stronger than others which are kept unagitated. —*Hogan.*

For the New England Farmer.

THE CURCULIO—WARTS ON PLUM TREES—PEAR BLIGHT.

MR. EDITOR:—I have noticed, within a few years, that much has been published in your paper and others, about the wart on plum trees, and the curculio, or plum weevil. The wart still continues to rage, and the trees are fast giving place to other trees of more sure growth and fruitfulness. To all human appearance, that beautiful fruit, the plum, is likely to become extinct.

I commenced cultivating the plum about 15 years ago. I believe then the curculio and the wart were but very little known in this country. My trees grew smooth and handsome, and I had plums in abundance, for a few years. Then came the curculio, apparently few in number, stinging the fruit, and depositing its egg, which caused the fruit to fall prematurely, and they have every year increased. Then came the wart, which was increased with the increase of the curculio. After much effort to discover the cause of the wart, I have come to the conclusion that it is caused by the curculio, and if we can destroy that insect we shall again have smooth trees and plenty of fruit.

I have been troubled very much with what some call *sap-blight* on the pear tree; mostly confined to the trunk of the tree, but recently, that or some other blight has commenced at the top of some of my best trees. I first discovered it by seeing the leaves turned black and the fruit withered up. I have taken off several tops, down some four feet. I wish to inquire if this is something new, for it has never been so with my trees before? PETER WAIT.

Danvers, August, 1858.

REMARKS.—The blight spoken of is no stranger to pear raisers. It is a disease, or difficulty not yet provided with a remedy.

HOOFS OF YOUNG HORSES.—We saw recently an instance of the ill effects resulting from the neglect to shorten the excessively long hoofs of young horses. A colt, with unusually long hoofs, had, in his play, stepped upon some hard substance, and broken off the hoof of one foot to the quick. The accident was attended with some bleeding and excessive lameness, the poor fellow being unwilling to put his foot to the ground. Ten minutes' work would have saved the animal much pain, and the owner might have had the profit of three months' growth, instead of having it arrested for that period.

But the occasional breaking off of a part of the hoof is but a trifle when compared with other mischiefs resulting from the same cause. When the toe is too long the strain on the fetlock-joint is greatly increased, and permanent injury to the suspenairy ligament of the foot often follows. Young horses frequently have windgalls, and other evidences of sprains, before they are put to work, and in ninety-nine cases out of a hundred these are where shortening of the toe has been neglected. On some gravelly and stony land and hard roads the hoofs will wear fast enough as

Nature evidently intended they should; but if horses are kept on smooth turf their feet must be kept short by artificial means.—*Ohio Farmer.*

For the New England Farmer.

FALL TRANSPLANTING.

Mr. Simon Brown:—This spring I became aware that I had lost about seven-eighths of my asparagus by *transplanting last fall:* it was originally planted too deep, and I wanted to change the location of the bed; so I had it all taken up and planted in a bed well manured, but not salted enough to prevent weeds from starting abundantly this spring. Hoping it might grow—though late—I put off setting new roots till July, (I was told by an honest Quaker who grows it largely, that he had transplanted it with success, as late as 6th mo.,) when, on removing the earth for planting, I found the skeletons of the roots of the old plants. Last fall was a warm one, and I suppose the manure was not only decomposed itself, but caused the roots to, also, as they were comparatively in a dormant state.

Heretofore I have transplanted in the spring and have been very successful; but last season I was induced to try the fall, not only for my asparagus, but for two shell-bark hickory, from a nursery, and two pear trees, two Hartford prolific grape vines, and some raspberry roots. Of the trees, though the bark (not the buds) is still green, only one has started to grow; and that not till after the 1st of July. One grape vine did not start at all, the other did feebly in the spring but is now doing pretty well. The raspberry roots are most all dead.

This ill success can not be attributed to improper management in planting, for I was careful not to let the manure come in immediate contact with the roots at the planting; and I procured 29 of the grape vines for 23 different persons—friends and neighbors—the vines and trees came with good roots, and from all I can learn, the stems looked fresh and promising during the winter; but I find, on inquiry, only about 6 living. The report from almost every one I ask being—they are dead and dried up. These were received the 9th of November, and mine were planted immediately. In justice to *fall transplanting* I ought to state that of two Clinton and one Dracut grape vines, three apple, six peach and one plum trees, planted at another time, though in the same month, all lived but the plum, and though some of the peach trees started very late, all are now doing well.

Very truly yours, O.

Worcester County, Aug. 3, 1858.

FENCE POSTS.

The durability of fence posts, it has been ascertained by reiterated experiments, is greatly increased by charring the bottoms, or that portion of them which is to be inserted in the soil, before setting them. There are but few methods, probably, of enhancing the durability of wood which is to be exposed to the action of moisture, or the soil, more effectual than that of charring. In old fields, the plow not unfrequently exhumes knots, and fragments of limbs which must have remained beneath the surface for several generations, yet in a perfectly sound condition in consequence of the exterior surface having been charred when the clearing of the soil was effected by "axe and brand." Oak and cedar posts, as well as stakes of all kinds, endure nearly twice as long when so prepared, and as the cost is, in most cases, merely nominal, the practice should universally prevail. It is well known that on many kinds of soil, the most valuable and durable kinds of wood will last but a few years if set in an unprepared state, and the cost of repairs is often one of the most serious drawbacks with which the farmer has to contend. We advise every one, therefore, who is about to erect new lines of fence, or to repair old ones, to make trial of this plan by all means, and to carefully observe the result.

EXTRACTS AND REPLIES.

WINTER WHEAT.

Having noticed a communication from Mr. Poor in your issue of the 7th inst., upon the subject of raising winter wheat, will you give such information as you may be able to respecting it? What soil is best adapted to it? What is the rule for making pickle? the quantity of seed per acre, and the price per bushel? Do you know anything of the banner wheat? W. Ellis.

Medway, Rockville, Aug. 9, 1858.

Remarks.—Any land that will produce three good crops of English hay in succession, after being tolerably well manured when it was laid down, will produce wheat. Moist, but not wet, gravelly or sandy loams are suitable, or clay loams if they are drained. Pine plain lands are not suitable.

No exact rule is necessary in making the pickle in which to soak the seed. If the water takes up as much salt as it will, it will not injure the grain. Soak it twelve hours.

From one bushel to a bushel and a half of seed is required per acre. Rich land requires *less* seed than poor land.

The *Banner* wheat is probably not a variety, but has only received a local name.

GREEN CUCUMBERS.

At the breakfast table this morning we had a discussion with regard to eating cucumbers. My opponents were willing to admit that all vegetables were more wholesome when ripe than when green, except cucumbers, and they were best green, from the fact they have always been used at that time. And now we want your opinion, or some other scientific man's on this subject.

Milford, N. H., 1858. Dyeo.

Remarks.—We never eat them, green or yellow, and do not feel competent to enlighten you on the subject—but leave it to some who have

been *killed* by eating them to reply. We confess, however, to their attractiveness both in taste and smell, and sometimes almost wish for an ostrich's gizzard with which to digest them.

—

GREEN CORN AS FODDER.

The great drawback in raising corn fodder for winter feed, is the great difficulty there is to get it sufficiently dry for storing, and if your readers would give their experience in the matter, it might prove advantageous to many. My own course has been to cut it just before frost, and bind in small bundles, (after allowing it to wilt through the day) and put it in large stacks, say from 12 to 20 bundles in each, and well set up with two bands, and the top turned over, and allow it to stand thus, keeping watch that none of it gets out of place until about the middle of November, or just before winter sets in. It never hurts in the stack out of doors as long as it is kept in good shape.

But the great trouble is, that after being housed and put in masses, it is so liable to heat as to render it almost impossible to keep it in good condition, unless you have a surplus of room to spread it, on scaffolds or places where the atmosphere has free access to it.

Please, Messrs. Editors, give us your views.

WM. J. PETTEE.

Salisbury, Conn., Aug. 10, 1858.

REMARKS.—The cultivation of southern corn, either to be used green or dried for fodder, has become quite common. Not only in the more thickly-settled towns is it cultivated, but we have observed it in the country where there is extensive and rich pasturage. It is found to be profitable, or the practice would be abandoned. Some persons cut it, spread it thinly upon the ground for a day or two, and then tie it in small bundles and put astride walls, fences, or poles put up for the purpose. We have never been satisfied that it is a profitable crop for dried fodder—better sow oats or millet. Will those having experience come to Mr. Pettee's help?

—

CAPONIZING AND SPAYING.

Will you please inform me of the best book on gardening and horticulture, or at least the one which would be the most suitable for a person having three or four acres of land near a good market?

Can you or any of your readers inform me of the process of forming a *capon?* I have read of those who treated fowls in this manner with apparent advantage.

What is your opinion of spaying cows? Is there any one in New England that performs the operation? P. F. M.

Lowell, Aug. 9, 1858.

REMARKS.—Purchase the *American Farmer's Encyclopædia*, and you can learn all about caponizing. Dr. JOSEPH REYNOLDS, of Concord, Mass., has performed the operation of spaying with complete success.

ACCIDENTS TO COLTS.

I recently noticed in the *Farmer* an account of a colt being injured by running in the pasture. Having a desire to do good if I can, I make a statement of a similar case. I had last winter two colts standing in an old barn together, one by the side of the barn, and the other next to him, the one hurt coming two years of age. I went in between the two one night with a lantern; and as my eye caught sight of the gambrel joint of the one standing next to the side of the barn, I put my hand over it and found it was much swollen; in front, and on the outside of the leg, where the skin meets between the joint and gambrel cord, there was a soft, puffy bunch, as big as a small hen's egg, and one on the inside not so large. I could not determine for some days how it was done; but as I was rubbing the leg I noticed some marks on the boarding, and examining it, I found that the boarding and shingling were started from the sill and post—the bottom or outside of the sill being some rotten. I found hair on the post, between the post and boarding, which convinced me that the leg was hurt by lying down and getting it between the posts and boarding.

I rubbed the joint with beef brine for some days, but thinking that it needed something more powerful, began to rub it two or three times a day with the oil of Origanum, mixed with alcohol, equal parts. Continuing this for some time, I thought it would cure it, as the bunch grew smaller, but I found after some time, that the bunch grew larger. I then took some of the oil and a little of the alcohol, and rubbed it hard with it for some time—the hair and skin came off, but the leg was cured by it, and there is no bunch on it now. I think our friend need not have a spavined colt if he attends to it closely.

Weston, Mass., Aug. 10. G. W. D.

—

BLOODY MILK.

I have a cow, that has her second calf, a fortnight old, that gives bloody milk. There is no appearance of garget and no swelling. Will you tell me through the columns of the *Farmer* the probable cause, and the remedy, if such there be.

Sherborn, Aug., 1858. M.

REMARKS.—We will pay you *one hundred dollars*, cash in hand, if you will tell us *what the cause is of this class of diseases in cows, and the way to prevent it*, and we can make more money out of the recipe, than all the milk *producers* in Massachusetts make out of their business, at the present prices of milk.

Give her three or four doses of *Aconite*, in as many days—four drops at a dose.

—

REMEDY FOR POISON.

In a recent *Farmer*, N. M., of Atkinson, N. H., inquired the remedy for dog-wood and ivy poison; here we find *blood-root* a sure cure. Take the green root, and pound or cut so as to get the juice, and rub on the poisoned parts; taking the dry root powdered, or steeped, as a tea, in very small doses, three times a day, rubing the green root on at the same time.

Shelburne, Vt., Aug. 16, 1858. M. A. P.

NEW ROCHELLE BLACKBERRY—CHERRY CURRANTS.

Can you tell me the price of the new Rochelle blackberry plants, and where they are to be had? also the best mode of cultivating them? What season is the best for transplanting? How many plants are required to set out one-fourth of an acre?

Do you know anything concerning the cherry currant? and where the plants are to be had?

A SUBSCRIBER.

West Henniker, N. H., Aug. 10, 1858.

REMARKS.—We do not know the price of the New Rochelle blackberry. You may have as many plants as you please by sending to our garden and taking them away, even to the last plant. We have nourished and cherished them for three years, and have not yet produced a dozen berries fit to eat. They sometimes grow very large, and are sour in proportion See another article in this paper about cherry currants.

—

SUCKERS AMONG CORN.

I have worked on several farms, and on some of them we cut the sucker away at the second time hoeing; on others we did not cut them away at any time. Where we left them, the ears were small; and where they were cut off, the ears were large and thrifty. Why should they do any good? The sap that flows into the sucker does the ear of corn no good, but takes goodness away from it. F. C. SHALLER.

Essex, Mass., 1858.

REMARKS.—We suppose the sucker bears the same relation to the stalk of corn to which it is attached, that side limbs or twigs do to a young tree, elaborating the sap and sending it on to perfect the fruit.

—

WHITE CROWS AND SWALLOWS.

I saw it stated that a boy in Georgia, a short time since, killed a white crow which was flying with a flock of black ones.

I saw, a few days ago, a white swallow flying with a flock of black ones, skipping over the water and mounting into the air. It resembled the black swallow in every form, as nigh as I could see. The question is, where did it come from?

Brandon, Vt. — L. F.

QUERY ABOUT A HORSE I HAVE.

I have a horse somewhat above twenty years of age, who is perfectly sound and well while feeding on grass, but feeding on hay, and especially on clover, is so relaxed as to be almost unfit for use. Can any of your numerous readers or correspondents specify a cure for the above disorder?

South Scituate, Aug., 1858. M. F.

—

POISON PLANTS IN MEADOWS.

Will some of the correspondents of the *Farmer* inform me what will cure the poison of dogwood and ivy, as many suffer from the effects of it in this section of the country, and oblige a subscriber. N. M.

Atkinson, N. H., Aug., 1858.

EDUCATION OF GIRLS.

The subject of physical education is beginning to attract attention. The following remarks are from the Boston *Courier*, written by the editor after having attended a school festival in Faneuil Hall: "But there was one thing we noticed which did throw a little shadow over our thoughts. We stood on the platform, very near the boys and girls, as they passed by to receive a bouquet at the hands of the Mayor. We could not help observing that not one girl in ten had the air and look of good health. There were very many lovely countenances—lovely with an expression of intellect and goodness—but they were like fair flowers resting upon a fragile stalk. Narrow chests, round shoulders, meagre forms, pallid cheeks, were far too common. There was a general want in their movements of the buoyant vivacity of youth and childhood. The heat of the day and nervous exhaustion of the occasion were to be taken into the account, and due allowance should be made for them. But this was not the first time that we were forced to the conclusion that here in Boston, in the education of girls, the body is lamentably neglected. And it is a very great and serious neglect, the consequences of which will not end with the sufferers themselves. Of what use is it to learn all sorts of things during the first sixteen years of life, and to stuff the brain with all kinds of knowledge, if the price be a feeble or diseased body? A finely endowed mind shut up in a sickly body is like a bright light in a broken lantern, liable to be blown out by a puff of wind or extinguished by a dash of rain.

"If the destiny of women were to be put under a glass and looked at, like a flower, it would be of little consequence; but woman must take her part in performing the duties and sustaining the burdens of life. These young medal scholars, in due time, will marry men whose lot it is to earn their bread by some kind of toil, in which their wives must needs aid them. To this service they will bring an intelligent capacity and a conscientious purpose; but how far will these go without health and the cheerful spirits which health gives? A sickly wife is no helpmate, but a hindermate. If we neglect the body the body will have its revenge. And are we not doing this? Are we not throwing our whole educational force upon the brain? Is not a healthy city born and bred woman getting to be as rare as a black swan? And is it not time to reform this altogether? Is it not time to think something of the casket as well as the jewel—something of the lantern as well as the light?"

☞ HALE'S experiments show that a sunflower, bulk for bulk, imbibes and perspires seventeen times more fresh liquor than a man, every twenty-four hours. LAWES' experiments "on the amount of water given off by plants during their growth," show that the clover on an acre that would afford two tons of hay, absorbs from the soil and gives off from its leaves 430 tons of water in 101 days, or eight thousand six hundred pounds per day. Those who allow clover, grass, weeds, or any other plants, to grow among their fruit trees or any cultivated crop, should not complain of drought.—*Genesee Farmer.*

For the New England Farmer.

ANURING GRASS LANDS.

MANUFACTURE OF MANURE—TIME OF APPLICATION, ETC.

The manufacture of milk is a matter of much interest to all farmers of the milk-producing States. It is settled beyond a doubt, in my mind, that milk is soon to become the leading article of production in the Northern States. The discussion of this question very naturally leads to the consideration of the most economical method of its production. It is well understood among our thinking farmers that green, or early cut hay and rowen, is the best fodder for producing milk in the winter months, or as soon as the grass upon our hills shall have failed us, as feeding upon the old fog or past litter grass, late in the fall, will invariably give the cows a back set. A resort to wheat shorts and corn meal is the only remedy in this case. The true principle of agricultural science introduces another practice, plain, cheaper and altogether dissimilar. Before we proceed farther upon this point, let us state one great *fact;* no farmer need think of success in his business without a good barn cellar, sufficiently capacious to enter into the manufacture of manure in large quantities; this is the basis of all successful farming. All the poorer portions of the farm should be turned into pasturage, and the whole energies and resources of the farm bestowed upon less acres.

MAKE LARGE QUANTITIES OF MANURE,

by hauling into the barn cellar leaves, leaf mould, muck, hay, straw, brakes and other vegetable matter in the fall, to be used for the field crops next season. Throw down all the hard droppings of the stock upon the materials already in the cellar, catching the urine as it passes through the leanto floor in a vat or cistern, built immediately under the floor for this purpose. The vat does not necessarily need be as long as the leanto floor, as by a narrow opening between the planks behind the stock, the liquids may pass down into a trough made of boards, and conveyed to the vat in the centre, of any capacity you desire. The main object of the vat is to accumulate liquids, and by the use of spouts convey them to any part of the cellar, which could not be done without it. All highly concentrated manures, as night soil, hen dung, hog dung and sheep dung, should always be diluted in several times their bulk in water, and poured upon less fertilizing substances. A large quantity of manure may be made in this way, from an ordinary stock. This, I have said, is for the field crops of the next season. As soon as this is drawn from the cellar, haul in native soil from the bank, muck and road wash, tie up your cows at night during the summer, gather into the vat as before all the powerful stimulants to be diluted and poured upon the heap, shovel over occasionally to pulverize and make fine, to be spread upon the grass land in the fall.

THE TIME FOR SPREADING

manure upon grass land gives rise to much dispute, as much depends upon circumstances and the conditions of the soil to be dressed. Upon dry land, where the several crops have been taken off, the first of November is a good time. Spreading at this season of the year, the land gets all of the benefits of the late rains and early snows of November and December, and becomes finely pulverized by the frosts of winter. A neighbor of mine has an acre of grass land, (light sandy soil,) from which he cuts three tons of hay every year, in two crops, two tons the first cutting and one the second. Eight cart loads of manure a year, keeps it up to this condition. Does that pay? Suppose some of our farmers who now mow over forty acres to get twenty tons of hay, should put ten acres of their best land into this condition; would it not pay better than it now does? Twenty tons of good, sweet juicy hay the first crop, and ten tons of rowen the second crop, and kept there by the use of eighty loads of good compost manure annually! Any industrious, progressive farmer, with twenty head of cattle and a good barn cellar, can bring ten acres of land into this condition in five years, and not neglect his field crops. Hay cut thus early, well dried and salted with two quarts of fine butter salt per ton, will sustain a bountiful supply of milk ten months in a year, instead of seven, as fed up dead hay and dry corn fodder in the old way. The salt so used, (two quarts per ton) will cause the food to relish better, and produce more milk by causing the cows to drink hearty, (give them warm drink in winter,) twice each day; furthermore, salt is the great preserver of animal and vegetable matter, and I firmly believe it is essential to the good health and condition of both man and beast. The cultivation of root crops for stock is both judicial and necessary to their health and thrift when fed upon the dry fodder and husks of the old plan; but I am satisfied roots will not pay when fed in connection with green fodder.

LEWIS L. PIERCE.

East Jaffrey, N. H., Aug., 1858.

AN AGED COUPLE.

The following fragment is from Gould & Lincoln's new work by Hugh Miller, entitled, "The Cruise of the Betsey, with Rambles of a Geologist," at page 390.

In this part of the country was an aged couple who had lived together, it was said, as man and wife, for more than sixty years; and nowhere was their tombstone and epitaph. They had lived on long after my departure; and when, as the seasons passed, men and women whose births and baptism had taken place since their wedding day, were falling around them well stricken in years, death seemed to have forgotten *them;* and when he came at last, their united ages made up well nigh two centuries. The wife had seen her ninety-sixth, and the husband his one hundred and second birthday.

It does not transcend the skill of the actuary to say how many thousand women must die under ninety-six for every one that reaches it, how many tens of thousands of men must die under one hundred and two for every man who attains to an age so extraordinary; but he would require to get beyond her tables in order to reckon up the chances against the women destined to attain to ninety-six being courted and married in early life by the man born to attain to one hundred and two.

For the New England Farmer.

CORN AND CORN-FODDER.

Mr. Editor:—The profits of farming usually turn, not on a single article, but on the various productions of the farm, and on none more, especially in New Hampshire, than in securing in a good condition corn and corn-fodder. The risk to the farmer on his corn crop, if I am not mistaken, is now much greater than it was forty, fifty or sixty years ago. From a child I have been somewhat accustomed to farming in a small way, usually cultivating from one to three acres of corn. Those whose corn fields cover ten, fifteen or twenty acres, will not, of course, feel interested in such small business. But you have probably more readers who will class with me, than with them, and it is for their benefit I write. What I have learned has been chiefly by experience and observation; and I am confident that my profits from a single acre have been greater than some of my neighbors from four or five acres. With your permission and aid, Mr. Editor, I will tell your readers "how I work it."

I endeavor, in the first place, to have good ripe seed, and to get it into the ground as early as the soil and season will warrant its quick germination and growth, and not before. I plow or cultivate and hoe three times. In respect to the ingathering, I first consider what advantages I have for securing, in a good condition, both the corn and the fodder; for the fodder from a single acre, if well secured, is quite an item in keeping stock. By cutting the stalks in a straw-cutter, wetting or sprinkling on a little meal, not a pound will be left. Most farmers have more or less room in their barns, or sheds where, for a time, the crop may be secured from rain, and in such a manner as not to be damaged by moulding, if set up or spread upon poles, where the air can circulate freely, and drying be effected without injury, although put in while quite green; and all kinds of stock are fond of such fodder. The corn, also, will be sweet and good for table use. As the time for frost approaches, I calculate, if occasion requires, to avail myself of all such advantages on my premises. If frost does not come at the proper time, after the corn is glazed over, and the tassel sere and dry, I cut the stalks of a part of my field and give them the best chance I can to dry for one or two days before binding up. I then bind and stook; and if the weather is favorable, let them stand until they can be safely packed away in the barn. But if a storm threatens, I get them in, and scatter about to dry, as best I can. That part of the field from which I cut the stalks I let stand until the corn and husks are so dry as to be in no danger of moulding. Ripened in this way, the husks are usually bright and good—much better than if cut up green and stooked out.

But sometimes in the early part of September there comes "a nipping frost." Previous to such a frost, if I can foresee the danger, I cut up at the roots, the remainder of the field; or if the frost steals upon me unawares, and is so severe as to affect the stalk, I cut it early in the morning and throw it into piles with the frost upon it. In this way the injury by the frost is much less than to let it stand until the sun abstracts the frost. I then bind with a band near the top. For convenience in handling, the bundles should not be very large.

If the weather is favorable, I give it what chance I can for two or three days to dry on the ground; but mean, if possible, to get it under cover before rains come. (And here let me say, that I imagine caps might be even of more use than in securing hay.) I then put it in as good condition to dry as possible, in leantos, sheds or out-houses, upon poles or hooks, where the air can circulate freely, and let it remain until it is so dry that both corn and fodder may be packed away without liability to mould. Thus I have good sweet corn for bread; and for my stock, fodder which is eagerly devoured.

I remember one year when the fall was unusually wet, I secured my little crop of about one acre in this way and had it good. One of my neighbors had about five acres which he cut up and stooked out and let it stand through long storms until it was almost worthless. I would certainly not have exchanged my one acre for his five. In this way I am confident the scale is often turned; and farming proves profitable or unprofitable just according as it is conducted. But "wisdom is profitable to direct, and they that are wise shall understand." N. S.

Monadnock, 1858.

AGRICULTURE IN NEW HAMPSHIRE.

We learn that the Hon. Caleb Cushing, of this State, has accepted an invitation from the *Connecticut River Valley Agricultural and Industrial Association*, to deliver an address before them at their Annual Fair, to be held in Charlestown, on the 21st, 22d and 23d days of September next.

The limits of this Society, we believe, embrace all of the Valley of the Connecticut River within New Hampshire and Vermont, a territory unequalled, perhaps, by any other of the same extent in New England, not only for the beauty of its scenery and the fertility of its soil, but also for the variety and excellence of the most important domestic animals.

We hope that General Cushing will find the occasion graced by an assemblage of the yeomanry of the valley, with their wives, daughters and sweethearts, who will be attentive hearers of what he says.

From a knowledge of the hospitality and urbanity of the people of Sullivan county, gained by frequent association with them, we feel confident that all who visit them on this occasion will be cordially received and handsomely entertained. They have made extensive preparation for the accommodation of exhibitors and visitors, in ample halls, stables, pens, &c., and have secured the services of *Hall's Boston Brass Band* to enliven the occasion, and to awaken new echoes among the hills of old Sullivan, and perhaps across the river in a sister State.

Our opinion, we trust, is well understood, as

it regards whatever of glare or glitter, of military display, of jockeyism, or political influences, that may give tone or coloring to these festivals of the farmer. We shall steadily oppose them all, under whatever blandishments they may present themselves, or by whomsoever they may be introduced. Nothing on earth can keep them pure, and make them useful, but a steady, uniform adherence to the principles upon which they were established, viz., *improvement in the art and science of Agriculture.* When this is lost sight of, and the occasion is made mainly to minister to the passions, then will one of the best customs of our people have lost its efficacy as a co-operator in the progress of rural art, and other customs will rise upon their ruins, having at least doubtful, if not decidedly demoralizing tendencies. We utter these words now, before the opening of the season of festivity, because in some cases last year we thought the true object was lost sight of, and display and excitement ruled the hour. We trust that wisdom will guide the counsels of our various societies, and that no word of reproach shall justly be suffered to rest upon them.

USE OF FAT IN ANIMAL ECONOMY.

The extraordinary abundance of fat in the bodies of animals inhabiting the intensely cold polar regions may be philosophically considered as a surplus stock of fuel, to be burnt for sustaining animal heat and motive power. Without this internal resource for a supply, during periods when no other available supplies of food are procurable from external sources, the animals of the arctic regions would speedily become frozen, remaining like marble statues fixed on the surface of the fields of ice and snow.

A most remarkably abundant provision of fatty and oily matter, formed from hydrogen and carbon, is found in the blubber which envelopes the bodies of the stored-up whales like a thick blanket. The philosophy of this surprising provision of available food and fuel, accumulated in these large fishes, admits of the following explanation. It appears that whales, in ranging from one feeding-ground to another, sometimes have to cross broad oceans. Without an extraordinary supply of carbon, provided like a stock of coals in the bunkers of a steamer, for sustaining continuous combustion during a long voyage, the whales might fail in exerting a motive power sufficient to propel their great bodies through the waters of the broad ocean. Whales have been captured from whose bodies more than two hundred barrels of oil have been extracted. As spermaceti and cetine contain above 90 per cent. of carbon and hydrogen, one of these fishes, therefore, carries with him about ten tons of combustible fuel, which is ready at all times to become absorbed and burnt, whenever this leviathan of the deep desires to develop powerful impulses of motive power, and rises to the surface of the ocean, to draw in a long breath of air, containing the requisite quantity of oxygen to burn his supply of carbon, and to allow it to recoil to its natural condition of carbonic acid gas. The more a whale exerts his locomotive powers, the oftener it is necessary for him to breathe, or "blow," as the whalers term it.

As amid abundant granaries and well-stored market-houses where there is little danger of falling short of a due supply of daily food, it is manifest that in the economy of nature there is no real necessity for this extraordinary supply of a surplus stock of carbonaceous fuel, enveloping the ribs of human beings.

The hump on the back of the camel—the locomotive engine of the wild deserts of Asia and Africa—may be deemed by the superficial observer as a deformity, or as a sort of natural saddle, ready prepared to bear the impositions of loads of merchandise, and thus stamping this animal as a "beast of burthen," apparently by the original design of the Creator. But this uncouth appendage, so far from being designed expressly for the purpose of a saddle, does really subserve the more essential purpose of a knapsack of provisions, to supply from this superabundant deposit of fat, which principally composes this hump, the carbon necessary for propelling the locomotive mechanism of his body across the wide wastes of sand, where no blade of grass is found to replenish his exhausted supplies of carbonaceous food. A surplus supply of water is similarly provided in the extraordinary sacs of his stomach, as a substitute for the tank applied to an artificial locomotive engine.

Adventurous mariners navigate their barks among the icebergs of the polar regions, to procure the valuable store of fat organized into the bodies of the whale, of the seal, and walrus, which they transport to marts of commerce for distribution, for the purpose of being burned as fuel in the lamps, instead in the lungs, the purpose for which it was originally designed. Men strip off the fur and down from the bodies of animals, whose breasts, exposed by submersion into icy water, and to keen wintry winds, require these non-conducting coverings, to sustain the animal heat generated by combustion in their bodies. These prized spoils of soft downs and furs are appropriated as a covering to sustain the same genial excitation within the glowing bosom of a civilized belle. In the colder bosom of an Esquimaux belle, residing in a crystal palace, and beneath a dome built of blocks of ice, not only are these soft external appliances of robes of fur necessary for sustaining a genial glow of life's warm current, but also the most extraordinary combustion of fatty, oily matter in her lungs. One of these belles, according to Capt. Parry's narrative of his voyage to the Arctic regions, sipped the oil from an extinguished lamp, and received a tallow candle as an acceptable bon-bon, the courteous captain kindly warning her by signs, not to choak herself by attempting to swallow the wick. It thus appears that the quantity of organic carbon which is scarcely adequate to serve as fuel in developing warmth and locomotive power in the bodies of human beings dwelling in the Arctic regions, would over-heat the bodies of the same individuals in warm tropical climates, and would speedily induce fatal inflammatory disorders.

To the ignorance of this simple fact may be ascribed the deaths of myriads of voyagers from

cold to warm climates. On the contrary, voyagers from sultry to cold climates require the combustion of more carbon in their lungs to sustain the average temperature of blood heat. Indeed, the sensation of declining warmth is so immediately attendant on a diminished supply of food that the terms cold and hunger have become associated together, and the phrase starving with cold, has lately been introduced into popular language in these countries.

Numerous facts tend to demonstrate that a vigorous and healthful condition of the animal mechanism can only be sustained by a due relative apportionment of the atoms of carbon and hydrogen, presented in the thin membranous air vessels of the lungs to the contact and union with due relative apportionment of the atoms of oxygen inhaled at every breath, and by the appliances of non-conducting clothing, to prevent the too rapid propagation of heat from the body. And thus the mechanical motive power of the vital agency of "life" truly subsists by the combustion of carbon, in accordance with the emblematical flame of the lamp, which was once lighted in every tomb by a classic and superstitious people, as allegorically representing the bright spirit which, for a brief time, animates the body, and then vanishes forever, like the quivering and expiring flame.—*Canadian Agriculturist.*

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

The belted kingfisher has long been known in the United States, and until the annexation of new territory to the union, was the only species. But since the admission of Texas, a handsome little bird, called the Texan green kingfisher, has been discovered, *(Ceryle Americana,) (Gmelin,)* which may readily be distinguished, by its small size and different plumage, from the common or belted kingfisher. The bird under consideration was known to the ancients by the name of Halcyon, and many fabulous stories are told of it, by the early writers. They supposed that it built its nest upon the surface of the sea, amongst the foam of the waves, and that it had the power of calming the troubled deep during the period of incubation. They only sat on their floating nest a few days, and during that short period, which was in the depth of winter, the mariner might, they said, sail in perfect security. Hence those days were called *Halcyon days.* There is a more modern fancy in regard to the kingfisher, which supposes that this bird, when stuffed and hung up overhead in a room, by a thread, will point the direction of the wind, after the manner somewhat of a dog vane. M. Du Pratz, in his history of Louisiana, says: "The kingfisher, it is well known, goes always against the wind, but perhaps few people know that it preserves the same property, when it is dead. I, myself, hung a dead one by a silk thread, directly over a sea compass, and I can declare it as a fact, that the bill was always turned towards the wind." Shakspeare, when speaking of sycophants, alludes to these fabulous notions, where he says they

"Turn their Halcyon beaks,
With every gale and vary of their masters."

Mr. Cassin says in his Birds of America, the family of kingfishers embraces about ninety species, of which seventy-seven are in the collection of the Philadelphia academy. The habits of the belted kingfisher are well described by our ornithologists, and the readers of the *N. E. Farmer* can consult them if they choose. I notice some of them speak of their nests being composed of a few sticks and feathers, but those eggs which I have examined were laid upon the bare earth. Their solitary and pisciverous habits, in the estimation of some persons, render them unfit themes for rural composition,but the bird really gives beauty and interest to the scenery around our mountain streams, and inland lakes, which it visits. And if the kingfisher has nothing particularly interesting in its general appearance, which, I am ready to admit, is grotesque, or in its note, which would probably remind a citizen of a watchman's rattle at midnight, calling for aid to secure a burglar, it certainly at least possesses one good trait of character, that of troubling no one, which is more than can be said of many of our birds. It likewise has the commendable habit of minding its own business, which is singularly honest and legitimate, not to say apostolic—that of fishing. And well may we quote and apply honest Izaak Walton's lines to our bird :—

"O, the gallant fisher's life,
It is the best of any;
'Tis full of pleasure, void of strife,
And 'tis belov'd by many:
Other joyes
Are but toyes;
Only this
Lawful is:
For our skill
Breeds no ill,
But content and pleasure."

The kingfisher is not confined to our inland waters, but is seen also on the sea-coast, around the harbors and rivers that empty into the ocean, diligently engaged in fishing in the shallows about their shores. And there is probably no bird better known to the boy, who resorts to the salt water to bathe or fish, than the kingfisher; and when his object of pursuit, the catching of minnows or tomcods, is the same, how often has he been surprised by the sudden approach of this bird, in its gliding flight and rattling churr. How often has he seen it plunge into the stream after a fish, and having caught it in his bill, return to its stand, a post of a water fence, and swallow the glittering prize headformost, and shake its head to clear its crest from the brine, and perhaps proud of the capital dive it made. And how often has the boy, unobserved as he was fishing from the sedgey bank, continued to watch the feathered fisher, forgetful of the many good bites at the end of his line, and viewing with astonishment the strange behavior of the bird, who is apparently choking with the fish it has just swallowed, when after much shaking of the head, gasping and violent renchings, it throws up a bundle of fish bones! But our bird is in no particular danger from being choked with its food, neither does it suffer from a bad or imperfect digestion, as we might ignorantly suppose, when viewing its most singular motions on its perch, where sitting by the hour together it digests its food and ejects the bones of the fish it has swallowed, in the form of pellets. These

are always to be found, where they are accustomed to perch, as well as in their breeding places, and has given rise to the notion in the old writers, that they build their nests of fish bones! The kingfisher is very generally found throughout the United States, and frequents all the large rivers in the far countries, up to the 67th degree of latitude.

Danvers-Port, Aug. 4th, 1858.

SIGNS OF THE RIPENESS OF GRAPES.

To produce a good wine, it is most important to know the external signs the grapes will have when perfectly ripe—each wine-grower should be well acquainted with them. But still a great many, even knowing these signs, will gather their grapes before full maturity, for the sake of gaining more wine—their principle is quantity, not quality. The signs are—

1. The stem of the grape should be of a brown color.
2. The cuticle of the berry must be clear and transparent.
3. The berries should separate easily from the stem.
4. The seed must be of a brown color.
5. The juice must be sweet and sticky.

Do not cut the grapes early in the morning, with the dew on them, nor during rainy weather, nor shortly after a rain.

Pick out the berries stung by wasps, or other insects, as these commonly have a putrid and sour taste. The unripe or green berries should also be carefully removed.

The precise time of perfect ripeness can only be discovered by chemical analysis, when the relative quantity of sugar and acids can easily be determined. The change of gum, dextrine and acids into sugar can easily be ascertained; and a suspension of transformation, or a consequent retrogade action, would show the real time of perfect maturity. L. REHFUSS.

When shall we have these critical and chemical analyses, which so often prove of great value.

Ed. West. Horticulturist.

THE AMERICAN STAPLE.—*The Egg Crop.*—It is estimated that there are 103,600,000 laying fowls in the country, of which 50,000,000 lay one egg a day throughout the year. This would give the annual crop of 18,250,000,000 eggs, and these at eight cents a dozen, would be worth $121,666,666!—*Buffalo Express, Aug. 4.*

The cotton crop of the United States, estimated at the seaboard, according to the census of 1850, amount to $78,264,927. Estimated at the same point—that is, according to New York prices today—the egg crop of the United States would amount to $259,011,666, or twice as much as the cotton, tobacco, rice, hay, hemp and sugar crops of the slave States put together. Adopting the estimate of the Buffalo print, the average of eggs consumed by each inhabitant of the United States each day is about two.—*New York Post.*

☞ A farmer returning home in his wagon, after delivering a load of corn, is a more certain sign of a national prosperity, than a nobleman riding in his chariot to the opera.

EXTRACTS AND REPLIES.

MEADOW CRANBERRIES — MEADOW MUD—IVY—PASTURE LANDS.

I wish to inquire through the columns of your paper what course it is best to take with a mossy meadow? (*a.*) The grass is very light; the meadow has been ditched, but it is filled up, and there is a good chance to drain it.

Would cranberries do well upon it? (*b.*)

Would meadow mud be beneficial to plow into light soiled land? (*c.*)

Would poor pasture land that has been plowed be the better to plow again and seed it?

What will kill ivy? GEORGE.

(*a.*) Drain and plow the meadow— manure with compost and seed with good upland grasses.

(*b.*) If you find cranberries growing naturally about the meadow, there is little doubt but they would do well transplanted there.

(*c.*) The meadow mud, old and well pulverized, would be excellent on your light land; and your "poor pasture land that has been plowed," would greatly rejoice if you were to plow it again, *manure it liberally* and re-seed it.

—

ROOTS FOR STOCK.

In your advocacy for the culture of root crops for the feed of stock, you might with great propriety have referred to the late Mr. WEBSTER, as well as Mr. BIDDLE—both first class minds in their day. I remember to have heard Mr. Webster discourse for half an hour or more, on the culture of the turnip in England, shortly after his visit to that country. I also remember seeing at the time of his burial a luxuriant growth of this vegetable, on his own fields, at his farm in Marshfield—for he was no visionary theorist—but was always ready to illustrate his faith by his works. Said he, "hundreds of acres of turnips are grown in England, expressly for the feed of sheep. Not only grown *for*, but harvested *by* the sheep themselves." Perhaps this mode of harvesting will not answer so well in our climate, where frosts and snow so much abound, when the feed is the most needed. Pardon these crude suggestions. I make them because you claimed to be excused from giving us something better, as you undoubtedly would, if you had attempted to answer my inquiry. P.

REMARKS.—We are glad to be reminded of Mr. WEBSTER'S teachings on this important subject, by our observing correspondent. We have often quoted Mr. Webster's opinions in regard to the root crop, and it was, more than anything else, his plain and forcible illustration of their value, that removed prejudices that we had long entertained against them as food for our neat stock.

—

CURE FOR DOG-WOOD AND IVY POISON.

In last week's *Farmer* I observed that it was asked by a subscriber what would cure dog-wood or ivy poison? I will tell you what is a sure cure when taken in season. Take the plant called mouse-ear, steep it to a strong tea, then add

milk; drink and wash in the tea, and by doing so a few times it will effect a complete cure. If the mouse-ear is not taken in season it will help. It is good for sheep when poisoned with lamb-kill.

SAMUEL WILSON, JR.

South Danvers, Aug., 1858.

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REMEDY FOR CURCULIO AND BLACK WART.

In answer to Mr. Wait, of Danvers, I would say that myself and some half dozen of my neighbors have for the last three years scattered air-slaked lime over our plum trees, from the time the blossom leaf begins to fall until the curculio has done working, which I think is about four weeks. Our trees are all in a fine, healthy state, and loaded with good, smooth fruit, and the trees are perfectly free from the black wart,—so much so that they attract the notice of strangers passing through our village. We use lime very freely, as often as the rain or dew takes it off. I don't know of anything the lime injures that it falls on.

Some throw the lime by hand. I use a box made of tin, the size and shape of a corn popper, the bottom filled with small holes, and this fixed to a pole of any length. I prefer oyster shell lime, as it is cheap and ready prepared. Plum trees are dead and dying all around me where they are left to take care of themselves.

Gardner, Mass., Aug., 1858. J. W. HILL.

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NATIVE GRAPES.

Mr. JOHN FISKE, of Holliston, has sent us some very large and nearly ripe native grapes, which he calls *August grapes*, as they usually ripen in that month. He states that he has taken this season, from a single vine, 375 pounds, which he has sold in Boston market for ten and twelve cents per pound. Profitable vine that! The grapes before us are too acid for our taste, and perhaps would be for dessert fruit—but for preserving and jellies must be valuable. We accept his proposition to furnish us a plant for our own grounds.

—

ABORTION IN COWS.

A correspondent at Groton suggests that the *ergot* in rye may be the cause of abortion in cows. He says:

"Rye produces ergot in larger quantities than anything else, and some farmers are in the habit of feeding freely with it to increase the quantity of milk—that may have some effect. Then there are several grasses which produce it to a greater or less degree, depending upon soil, season, &c.; wet seasons, or soil having a tendency to produce larger quantities. If you have not examined it with this view, this suggestion is all that is necessary."

—

PLANTING PEAS IN THE FALL.

As a matter of experiment, I planted in my garden two rows of peas of an early variety the eighth day of December. I buried them somewhat deeper than my usual custom; I laid over them a good covering of leaves, on which I put boards to keep them in their place. These I removed in March. On the sixth of April, I planted, side by side, the same variety of peas. Those planted in December, came up seven days before the others; were in blossom four days earlier, and were ready for use June 20th, and the spring planting only two days later. Probably not more than one-half the December planting ever vegetated; and at no time did they look as healthy as the others, and their yield was not half as much. Such is my experience in fall planting. Shall I have the experience of others, or must I try again, before I decide that fall planting is not to be recommended?

East Hampton, July, 1858. H. S.

—

CHAIN PUMPS.

Will you inform me through the *Farmer* what is the best kind of pump in a well thirty-two feet deep? How will a chain pump work?

West Townsend, 1858. C. W.

REMARKS.—In one of our recent rambles we found a chain pump in use for drawing water for the farm stock; it operated easily, brought water rapidly, and was cheap. They are now in common use, and we believe they give general satisfaction.

—

CREEPER FOWLS.

Will you, or any of your readers, have the goodness to inform me through the medium of your columns, where I can buy a few heavy fowls of the creeper class, with *very* short legs?

AN OLD SUBSCRIBER.

Boston, Aug. 31, 1858.

REMARKS.—We cannot—who will?

—

CHERRY CURRANTS.

Can you inform me through the *Farmer* where cuttings or plants of the cherry currant can be obtained, and at what price per hundred?

Bolton, Mass., Aug., 1858. N. H.

REMARKS.—M. P. Wilder, Boston, has the cherry currant in his catalogue, and gives the price as $2,00 per dozen roots or plants.

THE DIFFERENCE IN COWS.—It is not the cow that gives the most milk that will yield the most butter, nor is it the cow that gives the least milk that will yield the best cheese.

During a discussion upon the breeds of cattle in Scotland, as reported in the *Farmer's Magazine*, Mr. Kay, of Hilhead, in a humorous speech advocated the utility of the Ayrshire breed, but said that a good deal depended upon the keep and soil.

In regard to crossing, he said he had tried it, and found his best plan was to come back to the pure breed again. He said there was no accounting for the difference between the richness of cows' milk. He, himself, had an Ayrshire cow that gave 18 (Scotch) pints of milk per day (36 quarts Imperial,) and only three pounds of butter in the week, while he had a little cow whose milk produced a pound of butter daily.

THE POTATO ROT—ITS CAUSE AND CURE.

The opinion is general, we believe, that the potato rot is caused by atmospheric influences—we thought so until 1855, when LYMAN REED, Esq., then of Waltham, Mass., but now of Maryland, placed before us evidence that we could not resist, that *it is caused by an insect.* In 1847, Mr. ALFRED SMEE, surgeon to the Bank of England, investigated the matter with tireless assiduity, which resulted in the conviction that the rot was occasioned by an insect, and the publication of a book of 150 pages—but Mr. Smee suggested nothing as a remedy beyond picking the insect from the potato before planting it.

Mr. Reed has a remedy, upon which he has obtained a patent. Mr. Smee and Mr. Reed both impute the mischief to an insect which they call the *Aphis Vastator.*

More recently, Mr. ALEXANDER HENDERSON, of Buffalo, N. Y., has discovered that the *Phytocoris Linealaris* of P. de Barræ, or the *Capris Obliniatus* of Say, is the cause of the potato rot.

In that excellent journal of science and art, the *Scientific American*, we find some illustrations of the potato leaf and tuber, and the insects upon them, and an extended history of the discovery. We have thought the subject of sufficient importance to justify us in incurring the expense of the engravings which are beneath presented,

and with such portions of the history as we can find room for. In our next paper we propose to give Mr. Reed's history of his discovery. The *American* says:—

"One thing appears certain: Mr. Henderson has discoved that the *Phytocoris* are the primary cause of the potato rot, strictly so called, which first appeared in 1845, and which is identical with that of the present season.

If a tuber be examined with a microscope just before planting, on it may be seen a small, yellowish, translucent oval object, secured, as is common with insects' eggs, by a gummy substance to the potato. This will produce unsound potatoes, and the egg is that of the *Phytocoris.*—When the tuber is planted at the ordinary depth, this egg hatches, but if the potato is planted deep, the egg is killed, and therefore *deep planting* is one remedy, because air and light are prevented from coming to the delicate egg. After a sufficient amount of warmth and moisture has been obtained by the egg, the shortest time that has yet been observed being six days, the shell opens along its greater axis, and out comes the small insect, without wings, from about the twentieth to a twelfth of an inch long. It has six perfect legs, two attenuæ, a proboscis and a pair of brilliant black eyes. The proboscis is about two-thirds of its body in length, and one-third of its length from the head is thick, seen coiled upon itself at *c*, Fig. 3 (which is an enlarged view of the perfect insect, taken, with the other views, from actual plants, tubers and insects, brought to us by Mr. Henderson,) and the remainder is flexible and needle-like. It contains three tubes, through one of which it sucks up the juice of the plant for its nutriment; through another it probably ejects a poison into the plant, and through the other it may perform part of its respiration. The young insect being born alive, instantly requires nutriment, and commences feeding upon the seed, which, without the young are very numerous, does not perceptibly interfere with its growth. According to the amount

of heat and moisture in the soil, this goes on from two and a half to three months, when the insect gets wings, and the vine has attained its full growth.

The insect has all this time been working at the tuber (Fig. 2,) absorbing much of its nutritive juice, and injecting a poison, which at first appears in spots, as seen at *a*, Fig. 4. These rapidly spread to blotches, *b*, daily becoming more rotten, as *c*, and at last leaving very little of the sound potato, *d*.

The winged insect, tired of his dark underground quarters, moves a few stories higher, and settles himself upon the leaves of the vine, as seen at 1. They naturally attack the leaves and main stem, which, having their juices taken from them, wither and die, leaving little save their silicious and carbonaceous skeletons, and producing the appearance of the rot. The best evidence that a poison is also injected into the plant, is found in the fact that fungi in great abundance make their appearance, and these, as is well known, are generally the result of putrefactive fermentation.

Sometimes, in cold and stormy weather, the insect again descends and feeds upon the potato, which by this time is covered with fungi also. In the winter they emigrate, and nestling among the warm leaves of the mullen plant, endeavor to keep alive until the succeeding spring. Mr. Henderson has been engaged observing these insects since 1850, although for five years previously he had investigated the causes of the potato rot. On page 382 of the present volume of the *Scientific American*, we gave a brief outline of Mr. H.'s discoveries, from the Buffalo *Commercial*, which was the first newspaper that gave an extended notice of these facts.

Feeling the importance of the subject, we have given this much space to it, knowing that the majority of our readers will look with eagerness for Mr. H.'s simple remedies, which are, killing the egg by sprinkling quick-lime upon the seeds —preventing its development by deep planting, by hoeing up well round the vines, and filling up the cracks in the soil by pressure—or by preserving an old Scotch method of planting, which is as follows: The ground is plowed about a foot deep, the manure put in, with three to four inches of soil on that, and then the potato planted. Crops set in this way have never failed, the vines sometimes being attacked, but the tubers always remaining sound. We hope that many of our readers will set to work and experiment on this matter, and although the bug is very active and lively, he may be caught by shaking the vine quickly and picking him up."

FROG SHOWERS.

It may not here be out of place to give the interpretation of frog showers, as now most generally received by most competent judges. The actual fact, that considerable spaces of ground have been suddenly covered with numerous small frogs, where there were no frogs before, has been proved beyond a doubt. Some have called in the aid of waterspouts, whirlwinds, and similar causes, to account for their elevation into the regions of air, and some have even thought that they were formed in the clouds from whence they were precipitated. It has generally been in August, and often after a season of drought, that these hordes of frogs have made their appearance; but with Mrs. Siddons, we will exclaim, "How got they there?" Simply as follows: The animals have been hatched and quitted their tadpole state and their pond at the same time, days before they became visible to, or rather observed by, mortal eyes. Finding it unpleasant in the hot parched fields, and also running a great chance of being then and there dried up by the heat of the sun, they wisely retreated to the coolest and dampest places they could find, viz.: under clods and stones, where, on account of their dusky color, they escaped notice. Down comes the rain and out come the frogs pleased with the chance. Forthwith appears an article in the county paper; the good folks flock to see the phenomenon. There are the frogs, hopping about; the visitors remember the shower, and a simple countryman swears the frogs fell in the shower, and he saw them fall; frogs, visitors, countrymen, editors, are all pleased, and nobody undeceives them, nor are they willing to be undeceived.—*Buckland's Natural History.*

For the New England Farmer.

CROPS OF THE SEASON.

Four weeks ago, there was reason to expect a superabundant harvest from our fields. The corn had started into luxuriant growth. The potatoes never promised better. The onions were fair and bright—less marred by insects than was expected. Now, how changed the aspect; if rumor is to be credited, one-half our hopes are cut off.

One of our best cultivators informs us that he had ten acres of onions, from which he expected 4000 bushels to the acre, at least; and shall now be satisfied to get half this quantity. A blight has come over them, from what cause he knows not, unless it be the superabundant moisture, and almost frosty nights, and his fields look discouraging.

So true is it that man may plant, and industry cherish the growth, but to a power beyond the control of man must we look for the increase.

Sept. 1, 1858. ESSEX.

WINE FROM WILD GRAPES.—Among the good things which are furnished from Pomona's kingdom, we occasionally find a glass of wine of considerable merit. A bottle from Mr. S. H. ALLEN'S untamed vintage, at Shrewsbury, Mass., has just been broached, of which we have drank sufficiently deep to pronounce excellent. We have rarely tasted better from any source.

WINE FROM CURRANTS.—A bottle of currant wine from E. C. PURDY, Esq., of Somerville, an account of which was given by him last week, was also opened and found to be excellent. Mr. Purdy's mode of making his wine has some novelties, and may be found worthy of adoption. So with generous wine, and the kind remembrances of friends, we find ourselves greatly sustained on one of the hottest and most oppressive days of the season.

For the New England Farmer.

CURRANT WINE—PLUMS, &c.

A few weeks since, the *Farmer* re-published an article which I have seen in various other papers, on the subject of currant wine. The article assumes that none but the best refined sugar is fit for the currant wine manufacture. Believing this to be a mischievous error, I will give you my experience in the matter. I have been in the habit for several years of making up about a bushel of currants, each year, into wine—finding it a very convenient article for various culinary purposes, to say nothing of its use as a beverage. The quality has been pretty uniformly good, though I have never used refined sugar in the manufacture. Last year I purchased a quantity of very damp sugar which came from the bottom of a molasses hogshead, and for which I paid three cents a pound. I send you herewith a bottle of the wine made with this sugar, and if you do not pronounce it a good article, I can only say that "tastes differ." The wine will of course improve by age.

The article of which I send you a sample was made as follows: I picked from my garden about a bushel of well ripened currants. Heating some water in a wash-boiler, I placed the currants, say half a peck at a time, in a tin pail, and placing the pail in the water, scalded the currants until they became soft; then putting them in a linen bag, squezed them in a portion of the cold water I had measured out for the wine, until the juice was all expressed. In this way I obtained the juice from a bushel of currants in about half an hour; and I am satisfied that the scalding of the currants very much improves the wine. The quantity of water used was from six to seven gallons, and to this mixture was added about forty pounds of the molasses sugar before spoken of. The whole was then put into a well-cleaned cask, the bung of which was left out for two days, then laid on loose for a fortnight, then driven tight. The product is about seventeen gallons of wine, and the only actual outlay in money was a dollar and twenty cents for the sugar,—say about seven cents per gallon!

An article in the *Farmer* of Aug. 28, from Mr. Wait, of Danvers, speaks very despondingly of the plum culture, and expresses a fear that, between the ravages of the black wart and the curculio, "that beautiful fruit is likely to become extinct." I have a few plum trees in my garden which do not look very much like extinction. True, the very wet season has caused much of the fruit to rot, and the curculio has bitten a larger share than the law of equitable distribution would seem to have justified—thus causing a large portion of the fruit to fall prematurely from the tree. This is the case particularly with those excellent varieties, Prince's Imperial Gage, and Coe's Golden Drop. The heavy rains of Aug. 28 also caused such plums as were near ripening to burst their skins. Despite of all these adverse circumstances, most of my trees are well loaded with fruit. One small tree six years from the bud, of the variety called Drap d'Or, has yielded, as nearly as I can guess, a bushel of very sweet and delicious plums. This variety rots very little on the tree, bears wonderful crops, is not much bitten by the curculio, and I think will prove a profitable variety.

The same correspondent of your paper speaks of what he calls the sap blight in pear-trees—causing the leaves to turn black and the fruit to wither up. This disease is sometimes erroneously called "fire blight." The late Hon. John Lowell discovered, as he thought, to an absolute certainty, that this blight was caused by a very small insect called the *scolytus pyri*, which sometimes eats a circle round the tree in the alburnum or sap-wood,—thus causing a complete interruption in the flow of the sap. The remedy—and Mr. Lowell found it effectual—is to cut off the limb on the tree some two or three inches below the part affected, and burn it. By this means the disease may soon be eradicated.

With regard to the black wart on the plum, I have kept my trees pretty free of it by using salt in various forms, and by applying the knife freely whenever and wherever it makes its appearance. This disease is also probably caused by an insect, whose bite poisons the sap and causes it to form a fungus, which soon becomes a black and unsightly excrescence. I do not dread this half so much as I do the curculio. E. C. P.

Somerville, Mass.

For the New England Farmer.

LETTER FROM MR. HOLBROOK.

RECLAIMING AND DRAINING.

My Dear Mr. Brown:—For a few days past, I have had occasion to make frequent visits to a lowland meadow near my residence, and belonging to the Vermont State Asylum. The draining and improvement of this tract of land has interested me considerably for several years; and two years ago this month, I gave a communication to the *Farmer*, describing the methods pursued in reclaiming it.

The meadow consists of about thirty acres of Connecticut river intervale, lying quite low, and subject to overflow from the river when swollen by spring and fall rains, a thaw in the winter, or an uncommonly rainy spell in August. The land was also made wet by a little brook from the uplands, and by cold springs in various places, bubbling up from a considerable depth. Before draining the meadow, the flood water did not all pass off with the falling of the river, but portions of it, together with the waters of the brook and springs, remained to stagnate, or in other places to diminish slowly by evaporation. The land was thus kept wet, cold and sour, and produced little or nothing but the coarsest swale grasses. An ox team could not be driven over much of the land at all, and a man could not mow in the wetter portions without going over shoes in water.

Six years ago this summer, we determined to attempt to drain and reclaim the meadow, and an accurate survey was made with levelling instruments, to ascertain the exact lay of the surface, and where ditches could be opened that would give motion to the water and pass it to the river. Favorable routes were found for the water to move off, and two capacious open ditches were accordingly made, starting at a common point at the upper end, sweeping through the lower portions of the meadow, by widely separate routes, but uniting in one ditch at the lower end, and from thence to the river. The eye, alone, would

not have pointed out these routes for the ditches, for where they united, nearest the river, there was a swell in the land, making the surface higher than where the ditches started; but the instruments showed that just beyond the swell the land was low enough for the purposes of drainage, and they also showed how deep the cut must be to pass the water through properly to the river. So much for the benefits of an accurate survey when attempting to drain lowlands.

The ditches thus completed and the land relieved of stagnant water, about ten acres were each year plowed up, manured with compost, and laid down with the cultivated grasses; and the third year from the commencement nearly the entire meadow had been reclaimed. After plowing a piece, and before manuring and seeding it, the occasional slight hollows were smoothed up to the general surface, by removing earth into them from the surrounding crowning places, with the oxen and scraper; so that no portion of the flood water should remain on the land, but all might readily pass off with the falling of the river. The breaking of the swale sod was not an easy task. The coarse water grasses had held possession of the land for a long period, and formed a strong, thickly-rooted and ugly sward, which could not be turned at all by a plow of the usual size. Accordingly a very large plow was procured, which, drawn by six oxen, went entirely below the roots of the grasses, and turned up deep, wide furrows, laying them over, in spite of their stiffness.

The condition of the land has been very much changed by draining and reclaiming. The waters are off at once on the receding of a flood, loaded teams can be driven anywhere on the land, and large crops of good hay have been taken off. On a few acres, however, of the lowest portions of the meadow first plowed and seeded, the water grasses are coming in. Indeed, it was not expected that the land could be wholly tamed of its wild, sour nature, at once, but rather that in the course of time, after several turns at plowing, manuring and reseeding, this wildness would be mostly taken out of it, and the water grasses, finding the conditions so modified, would nearly or quite disappear.

The lower portion of the meadow seeded down six years ago, where the wild grasses are getting in, is now being plowed up and reseeded, turning it over ten to twelve inches deep with the Universal Plow, rigged for double, or sod and subsoil plowing, and drawn by three yokes of oxen. The furrows turn over kindly now, and the oxen have good firm footing and a comparatively easy task. The land has evidently settled down several inches since it was first ditched and plowed. When plowed six years ago, this lowest ground, in particular, was very boggy, sticky and difficult to overturn, and the oxen were continually miring ankle to knee deep in the furrows, and had a laborious job of it.

After plowing, the land is to be harrowed fine, and some day this week will be stocked down with a mixture of fowl-meadow, herds-grass and red-top seeds, bushed in. We expect to be able to give a more permanently good quality to the hay produced on this land, by stocking it in part with the fowl-meadow grass. Several little patches of this grass have come in on the meadow, and it seems to occupy the soil whenever it gets foothold, in spite of floods or the coarse water grasses. It also yields a large swath to the scythe, and a very superb quality of hay. It is hoped that when the herds-grass and red-top after a while begin to disappear, the fowl-meadow grass will spread and occupy their place, and shut out the poorer wild grasses. I intend to observe the operation of the thing pretty closely, and may perhaps hereafter have something of interest to communicate about it. My impression now is, that the fowl-meadow grass may be successfully cultivated on low moist lands, and afford surer and larger crops of hay than herds-grass and red-top. The greatest difficulty, at first, in attempting to cultivate this grass, will be to procure the seed. A large seed-store in Boston was applied to a few days since for fowl-meadow seed, and could only furnish two bushels. Mr. Wetherell, however, informs us in the *Farmer*, in his recent interesting and valuable essay upon this grass, that the seed is gathered and sold considerably in the neighborhood of Portland, Me.

August and September form the most favorable portion of the year for draining and reclaiming wet lands. Haying and the early harvest being mostly finished, at this season, there is time for draining operations, and the ground is generally drier and more accessible and easily worked than at any other time in the year. Almost every farm has a larger or smaller tract of wet land upon it. Such land is generally the richest portion of the farm, and when once drained and brought under tillage, produces very large crops of grass certainly, and often of corn and other grain; while it requires much less manure to keep it productive than is necessary to bring up the worn-out dry lands to anything like the same fertility, or to sustain them in high heart after they have been made productive.

Improvements upon these wet lands generally prove profitable investments—more so than to expend the same money in buying more land. They in effect add to the territorial extent of the farm already owned. I have observed several instances where these improvements have made it necessary to provide more than double the barn room to store the crops of the farm than was orignally needed, and that too without any increase of acres. These lands are often so situated as to receive the wash of many acres of surrounding lands, and that wash, after the wet land has been reclaimed, is all turned to the best account. There is a peculiar satisfaction, also, in looking upon smiling fields, productive of the finest of grain and grass, that one has by his own efforts redeemed from a wild and perhaps pestiferous morass. He feels that he has added to the wealth of the country, as well as to his own resources.

The amount of outlay which may be necessary or politic in reclaiming swale lands, depends upon several circumstances, such as the constitution of the soil and subsoil, the way in which the water comes upon it, the location of the farm as affecting the value of land and products, and the price of labor. Some lands require thorough underdraining, with stone or tile, to give them that measure of dryness and warmth that shall bring out their full power of production. But they may be located where land and products are too cheap to warrant so large an outlay; and perhaps a more superficial drainage may be so well planned

and executed as to very essentially improve them, at a reasonable outlay, under the circumstances. In locations, however, where the value of land is high, and its products are near market and bear a high price, the thorough underdraining of bog-meadows and swaly lands needing that process, proves invariably a profitable investment. I have myself observed several specimens of underdraining, both with stone and tile, that have produced an astonishing change in the land, and from which very satisfactory returns are yearly realized.

It is often the case in New England, that wet lands are quite favorably situated for draining, so that a comparatively small outlay of well-directed labor will relieve them of undue moisture and coldness, and much change the quality of their products. Where the moisture arises from surface water, then it is only necessary to carry it off by open ditches. Or where the moisture is produced by springs flowing in from the adjoining higher lands, and the surface soil rests upon a subsoil not too close and impervious, then by simply opening a suitable ditch around the wet field, or across the side where the water comes in, so as to cut it off and conduct it away, and plowing the land deep and fine, backfurrowing it into beds of two to three rods wide, clearing out the dead furrows and smoothing up any little depressions there may be in the general surface of the beds, the land may be so far improved as to produce fine crops of grass certainly, and perhaps a rotation of good farm crops generally. I will mention two of the instances of this kind of improvement that have come under my observation.

Mr. Charles C. Lynde, of Guilford, Vt., has a tract of land situated on a gentle slope to the South, which was formerly too wet and cold for tillage purposes, and was mostly overrun with inferior grasses of a swampy nature. The wetness proceeded from a belt of cold springs, issuing out of the higher lands all along the upper or northerly edge of this field. A ditch was opened across the slope, on the upper side, and early in June, the wet land was deeply plowed, and then harrowed thoroughly. In August it was cross plowed, and harrowed several times both ways, so as to level the little inequalities of the surface as well as might be. Then it was laid up in quite crowning beds, two rods in width, by backfurrowing each bed two or three times with the plow, laying the beds up and down the slope. The dead furrows were cleared out with the shovel, spreading the dirt upon the beds, and levelling up any little hollows in them. The land was dressed with a compost of one part horse manure to about three parts sandy loam, and seeded thickly with herds-grass and red-top. It has produced heavy crops of good hay for several years, and will continue to do so by an occasional plowing, manuring and reseeding, or by top-dressing alone.

A few years since, in visiting the late Judge Hayes, at his residence in South Berwick, Me., my attention was directed to a lowland meadow of sixty acres, comprising a portion of his farm, and which he had brought into good grass. The meadow is of oblong shape, quite uniform width, and surrounded on all sides by gradually rising uplands. A large portion of it had been cleared and mowed annually as sour meadow, for a very long period. The meadow had no natural outlet, and was made wet by springs flowing in from the uplands, which though not sufficiently numerous to form a pond upon the surface, yet remaining in the soil, made it cold, wet and boggy. On the outer edges, where there was the most water, the muck was from one to two feet deep, and gradually lessened towards the centre, where it was six or eight inches deep—the whole resting on a clayey bottom. A ditch three feet deep, and of suitable width to give a good slope to the sides, was opened all around the edge of the meadow, thus cutting off all springs from the uplands. The water was all collected in one channel at the lower end of the meadow, and conducted off through a deep cut made in the upland, which at this point is lower than elsewhere, and after going a short distance, a sufficient natural descent was found to dispose of the water without further digging.

After ditching, a few acres of the meadow were each year plowed up by backfurrowing into beds of two rods in width, the dead furrows were cleared out pretty deeply, spreading the earth upon the beds and levelling their inequalities. Compost made of manure and upland loam was carried on to the land by sledding in the winter, and the next season spread and harrowed in, and the land seeded to grass. After mowing about five years, the land was again plowed by backfurrowing, manured and reseeded. In process of time the whole meadow was reclaimed in this way, and produced a great quantity of good hay. The meadow eventually became so settled and firm as to be accessible at all times with loaded teams.

But my communication is getting quite too long, though I think of several other points I would like to mention in connection with this matter of draining. F. HOLBROOK.

Brattleboro', Aug. 10, 1858.

KEEPING THE TEETH CLEAN.

Microscopical examinations have been made of the matter deposited on the teeth and gums of more than forty individuals, selected from all classes of society, in every variety of bodily condition, and in nearly every case animal and vegetable parasites have been discovered. Of the animal parasites there were three or four species, and of the vegetable, one or two. In fact, the only persons whose mouths were found to be completely free of them, cleansed their teeth four times daily, using soap. One or two of these individuals also passed a thread between the teeth, to cleanse them more effectually. In all cases the number of parasites was greater in proportion to the neglect of cleanliness. The effect of the application of various agents was also noticed. Tobacco juice and smoke did not injure their vitality in the least. The same was true of the chlorine tooth-wash, of pulverized bark, of soda, ammonia, and various other popular detergents. The application of soap, however, appears to destroy them instantly. We may hence infer that this is the best and most proper specific for the teeth. In all cases where it has been tried it received unqualified commendation. It may also be proper to add that none but the purest white or Castile soaps should be used. We have been in the habit of using finely pulverized charcoal for this purpose, and have found it a most excellent dentifrice.—*Scientific American.*

For the New England Farmer.

BOOK-FARMING.

BY ICHABOD HOE.

"Wal, neighbor Gilman, what new-fangled notion you goin' into now, I should like to know? Beats all, what nonsense some folks do run into, now'days."

"I'm building a hen-house, and I'm going to try and make a place under it to save the sink-slops and the guano from the hen-roost, too."

"Sink slops, guano, and fol-de-rol! All this comes of reading so many ag'cul'tral books and papers, and gettin' yer head full of silly notions, and spendin' yer means in what I call book-farmin', which is the worst kind of nonsense."

"It takes everybody to know everything, Mr. Richards, and everybody may be supposed to know something. You have your views, and have a right to them, and to act upon them. But whether you are wiser than others, remains to be seen."

"Wal, any fool might see that a large farm is more profitable to carry on than a little one, and if instead of spendin' yer time and money in buyin' and readin' so many good-for-nothin' books and papers, and on so many foolish notions, you were to save yer money and buy land with it, you might do something in the world."

"Perhaps any *fool* might think it wiser to half cultivate a great farm than well cultivate a small one; for my part, I am very well content with my thirty-acre farm, and perhaps a few years may convince even you that all the folly and nonsense in the world is not confined to books or those who read them."

"At the eend of that few years of yer book-farmin', I shouldn't wonder if you found yourself in the poor-house. My father was one of the best farmers of his day, and made more money than two or three farmers do now'days, and all the books and papers he used to buy in a year was an almanac."

"His system of farming might do where the land was newer and more productive than it is now. But we have got to take a little different course, or we shall all get into the poor-house together—there is no doubt about that."

"Nonsense, nonsense! the sile is the same now 'twas then, but the climate has changed some, and things winter-kill worse than they used to. But le's see, you must 'ev laid out mor'n a hundred dollars, fust and last, sense you begun this 'ere book-farmin' of yourn. You put a suller under yer barn fust, then you made some kind of fixin' under yer little-house, and now yer spendin' twenty or thirty dollars on a hen-house."

"Yes, the cellar under my barn cost me, reckoning time and all, very near a hundred dollars, and I consider it money well spent."

This conversation took place between two neighboring New England farmers of widely different views. Mr. Richards had a large farm of naturally strong but stony soil, which he farmed in the old-fashioned way. Mr. Gilman was a man of less means but more intelligence. He had begun to have some idea of a more sensible way of cultivating the soil than the skimming method. His farm and that of Mr. Richards lay adjoining. Mr. Richards was a very matter-of-fact kind of man—and anything that did not promise to bring an immediate return for its outlay was considered worthless by him. But imperceptibly to him, at first, under his system of cultivation, his farm was constantly running down. By degrees the hay crop sensibly decreased, and this rendered it necessary to reduce the stock, and this, of course, reduced the amount of manure for fertilizing the soil. What made the matter still worse, Mr. Richards continued to cultivate the same number of acres that he did when his lands were more fertile, and when he had more manure, too. Just so much land had to be "broke up," and just so much "laid down," every year, and the breaking up and the laying down did less and less good each year, for at each laying down the land became more compact and heavy, and having a greater tendency to hold the water from rains and snows on the surface, which, freezing there, injured or winter-killed the grass. And what really arose from the ignorance and mismanagement of Richards, himself, he attributed to the climate and to Providence.

This dislike to book-farming extended also to the improvements in the tools and implements of farming; his plowing, which was in fact only a kind of rooting, was done with the old-fashioned home-made plows, heavy, clumsy, and worse than worthless. The work after such plowing was work of the hardest kind. It was hard planting, and harder yet hoeing, and both consumed triple the time that should have been required, which made the work with Mr. Richards always behind-hand, though he worked and hurried early and late. By plowing too much, the plowing was not done till after the planting should have been done, and the planting was not done till after some part of the crops were suffering from neglect of hoeing; and before the hoeing could be done, the haying would be pressing, and so it went from the opening of spring to the closing in of winter. A farm managed in that way makes a slave of the proprietor and all connected with it, and after all, brings no satisfaction, but disappointment and vexation. Everything seemed to Mr. Richards to conspire to injure his prospects and blight his hopes. At one time everything was suffering from too much wet, and then everything was parching up from the drought, and what succeeded in surviving these evils the insects would beset or destroy.

The course of Mr. Gilman was very different. When he first began to make experiments and "improvements," he very naturally committed some "morus multicaulus" blunders, but he was even then, on the whole, a gainer. He soon discovered that farmers generally were committing one great blunder in attempting to cultivate too much land; that there was a vast difference between just skimming the surface and deep thorough cultivation, in the result. This very soon led him to place a proper estimate upon fertilizers, and to use every means in his power, to obtain them. He saw at once the wickedness and folly of throwing the manure of the stalls out-doors to be drenched by the rains and dried by winds till it was nearly worthless, and he set about making a good, warm, substantial cellar under his whole barn, into which the manure was to be thrown, and where by proper

absorbents all the liquid and more valuable parts of the manures could be preserved. By this, and other means already referred to, farmer Gilman increased both the quantity and quality of his manure heaps, and as he plowed no more land than he could plow well, and manure well, and cultivate well, his lands begun in a short time to manifest a very different state and condition from his neighbor's. When the plow was started it was thrust down into the soil, with a will, and and if a stone turned it out that stone was dug out, or sunk below the reach of the plow. A piece of ground plowed in this manner, could be planted and cultivated with less than half the time and strength required in cultivating a piece but half-plowed, and beside that, the unfavorable season had comparatively little effect upon the crops. If it was a wet season, the land was stirred so deep and left so open that the water descended easily and left vegetation uninjured; and if it was a dry season, then the roots of the crops could easily penetrate below the heat and drought, and seemed to flourish all the better.

A few years of such cultivation brought the tillage lands of Mr. Gilman into a good state of cultivation, and in proportion as success crowned his efforts, he became the more deeply interested in farming. Work with him was a continual pastime. His fields were his laboratory, and no alchemist ever pursued his studies and researches with more ardor and interest than Farmer Gilman tilled his farm. By plowing no more than he could plow well and dress well, he always had time to do everything well, and often found time to spare. Soon after he began this course he took advantage of his spare time to try an experiment in underdraining, of which he saw and read so much in his papers and periodicals. There was a place in the field near the house, of nearly or quite an acre, that, though it was not really low ground, was what farmers call "cold and wet," and for years had produced but little else than short species of brakes called polly-pod. It was a rough, hard, stony, unpromising-looking spot, and went by the name of "the hop-yard."

Upon this he determined to try an experiment in underdraining. The first few days' work upon the "hop-yard" was rather a poor show, and would have discouraged a less resolute spirit. One day, while at work, Mr. Richards happened along, and wanted to know "what 'pon airth he was 'bout there?"

"I'm trying to sink a blind ditch through here," answered Mr. Gilman, upon which Richards exploded in a broad yaw-haw at "sich nonsense."

"That's what ye call book-farmin', I suppose. Now 'tis right in the midst of plantin' time, and yer spendin' yer time makin' a ditch on high ground! What in natur do ye think yer comin' tu, neighbor?"

"I finished all my planting two or three days ago, and as it isn't hoeing time yet, I thought I would try an experiment."

"Try a 'speriment! fol-de-rol! you had better be plowin' and plantin'! 'taint too late yit, for what do ye think yer goin' to support yer family on next winter, with so little ground planted as you've got?"

"Well, we're in hopes to get along, somehow. Perhaps rather than see us suffer want, some of our neighbors would help us to a few bushels of corn, or a few beans, for charity."

"Not a kernel from me, I can tell ye. A man that'll fool away his time on sich a piece of land as that needn't look for help nor sympathy from me. All this nonsense comes of readin' them silly ag'cult'ral books. Now I advise ye to burn up yer books and go back to the old way of farming."

Having delivered himself of this piece of advice, Mr. Richards departed, more than ever confirmed in his dislike of book-farming.

For the New England Farmer.

LITTLE THINGS,

Or, A Walk in My Garden....No. 16.

While looking at a thrifty looking plum tree, I came to this conclusion: that the farmer should plant no more trees, whether few or many, than what he can take the best possible care of. Does not this rule apply to everything? Does not the net profit of farming depend on this principle? I leave the question for politico-economical farmers to determine.

THE CURCULIO.

I have succeeded in raising a good lot of plums by thoroughly syringing my trees with whitewash and kreosote. It was a real Sebastopol fight, but the big Jeffersons, McLaughlins and Imperial Gages look very tempting. I have never yet seen the black knot on my trees. The next year I propose to add a solution of glue to the mixture. While peeping out from under my trees I spied a neighbor's field dotted with

HAY CAPS,

which are with us no longer a matter of experiment. How beautifully they protect the wheat crop from sprouting. I believe that plenty of hay caps, a good barometer and a little attention to the weather, would, all combined with good judgment, do away with damaged hay and grain.

RADISHES.

Persons troubled with the radish worm may avoid them by sowing the seed in subsoil or nearly pure sand, and making use of liquid manure.

WOODPECKERS.

Politicians in this State are discussing the merits and demerits of the woodpecker. Before I was aware of this fact, one of them, who, by the way, is a good grafter, but possessed of a strong political bias, declared to me that woodpeckers did not attack our apple trees so much for the worms as for the sap. He said that the sweet trees suffered most. Will some woodpecker-ologist give us their experience?

THE CHUFA OR EARTH ALMOND.

This new vegetable seems to require but little attention, and may prove a favorite among the children.

APPLES

are scarcer than last year in Maine. Orchards that bore largely last year are nearly destitute of fruit.

CROPS GENERALLY IN MAINE.

It is believed that corn and potatoes are bet-

ter than for many years. Oats good. Rye and wheat very good. The weevil has done but little mischief in this vicinity. As I was returning from my walk I found

THE BARK CRACKED ON A PLUM TREE,

and the gum oozing out. Can this be remedied by slitting down the bark in the spring?

Yours, rather plumish, N. T. T.

Bethel, Me., Aug. 30, 1858.

HYMN OF THE HARVESTERS.

We gather them in—the bright green leaves,
With our scythes and rakes to-day,
And the mow grows big, as the pitcher heaves
His lifts in the sweltering hay.
O ho! a field! for the mower's scythe
Hath a ring as of destiny,
Sweeping the earth of its burden lithe,
As it sung in wrathful glee.

We gather them in—the nodding plumes
Of the yellow and bended grain,
And the flash of our sickles' light illumes
Our march o'er the vanquished plain.
Anon we come with the steed-drawn car—
The cunning of modern laws;
And the acres stoop to its clanging jar,
As it reeks its hungry jaws.

We gather them in—the mellow fruits
From the shrub, the vine and tree,
With their russet, and golden and purple suits,
To garnish our treasury.
And each has a juicy treasure stored
All aneath its tainted rind,
To cheer our guests at the social board,
When we leave our cares behind.

We gather them in—this goodly store,
But not with miser's gust.
For the Great All Father we adore
Hath but given it in trust;
All our work of death is but for life,
In the wintry days to come—
Then a blessing upon the reapers' strife,
And a shout at this Harvest Home.

TO MANAGE A REARING HORSE.

Whenever you perceive a horse's inclination to rear, separate your reins and prepare for him. The instant he is about to rise, slacken one hand, and bend or twist his head with the other; keeping your hands low. This bending compels him to move a hind leg, and, of necessity, brings his fore feet down. Instantly twist him completely round two or three times, which will confuse him very much, and throw him off his guard. The moment you have finished twisting him round, place his head in the direction you wish him to proceed, apply the spurs, and he will not fail to go forwards. If the situation be convenient, press him into a gallop, and apply the spurs and whip two or three times severely. The horse will not, perhaps, be quite satisfied with the defeat, but may feel disposed to try again for the mastery. Should this be the case, you have only to twist him, etc., as before, and you will find, that in the second struggle, he will be more easily subdued than on the former occasion; in fact, you will see him quail under the operation. It rarely happens that a rearing horse after having been treated in the way described, will resort to this trick a third time.—*British Sportsman.*

DELEGATES TO THE AGRICULTURAL SOCIETIES.

The following is a list of delegates appointed by the Board of Agriculture at its last meeting to attend and report upon the exhibitions of the various county agricultural societies:

Essex at Danvers.....Jabez Fisher, of Fitchburg
Middlesex at Concord.....George Marston, Barnstable.
Mid. South at Framingham.....M. P. Wilder, Dorchester.
Middlesex North at Lowell.....Wm. S. Lewis, Framingham.
Worcester at Worcester.....Wm. Sutton, South Danvers.
Worcester West at Barre.....Luke Sweetser, Amherst.
Worcester North at Fitchburg.....T. J. Field, Northfield.
Worcester South at Sturbridge.....J. C. Bartlett, Chelmsford.
Hampshire, Franklin and Hampden at Northampton,
B. V. French, Dorchester.
Hampshire at Amherst.....George M. Atwater, Springfield.
Hampden East at Palmer.....Josiah White, Petersham.
Franklin at Greenfield.....C. G. Davis, Plymouth.
Berkshire at Pittsfield.....N. Durfee, Fall River.
Hoosatonic at Great Barrington....E. W. Gardner, Nantucket.
Norfolk at Dedham.....J. S. Grennell, Greenfield.
Bristol at Taunton.....C. Knox, Palmer.
Plymouth at Bridgewater.....Simon Brown, Concord.
Barnstable at Barnstable.....S. Bushnell, Sheffield.
Nantucket at Nantucket.....C. P. Tracy, Hinsdale.

For the New England Farmer.

EFFECTS OF THE SOIL ON PARTICULAR PLANTS.

"When scions are taken from a fruit tree and grafted upon stocks raised from seeds of that same fruit tree, will any advantage or detriment result from the practice, or is it simply immaterial?"

"In selecting a suitable soil for a fruit tree, should the ground be chosen with reference to the graft or to the stock?"

"FAR EAST," *in New England Farmer, May*, 1858.

MR. EDITOR:—It is well known that, when the seed of an esteemed variety of pear is committed to the soil, that seed does not produce the same variety, but a number of varieties, no two of which are the same, nor perhaps like any other variety of the kind that had ever been in existence. Such being the fact, it is easy to infer, even by the most inexperienced, that no advantage would accrue from the practice alluded to by your correspondent, and no deterioration whatever could arise from the use of such stocks more than from that of any other "free stock," which, in point of fact, they are. It is, therefore, "simply immaterial," and no more necessary than that the *Asphodel* should be planted in abundance, in and around our cemeteries, to supply the *manes* of the departed with food, in order to avert the terrible alternative of having hungry ghosts devour one another.

But it is of paramount importance that the stock should invariably be adapted to the soil. As a dry, siliceous soil for the free or pear stock; and a clayey, heavy, or moist soil for the quince.

This is what our standard pomological works would inculcate, when they describe different varieties as succeeding better on some soils than on others; that is, the varieties described as affecting certain specified soils, should be grafted on stocks naturally adapted to those soils rather than on any other.

The *rationale* of this is simple. We have but two differently constituted root-systems, or, in other words, two kinds of stocks to choose from—the pear and the quince. Also, by a little generalization, all kinds of soil may be resolved into two—the moist and dry, considering it without regard to its organic constituents, and chiefly as to its power of absorbing and giving off heat

and moisture; for through these agents principally, it acts on all vegetable tissue. In one of these soils, as already stated, the pear delights and luxuriates. The quince flourishes in the other.

It matters not, then, whether we adopt the system of Dochmahl, Knight, or any other of those pomological worthies; this general law must be observed, and cannot be departed from with impunity; modified it may be, to suit the exigences of locality, or climate, or both; but still regarded as the basis of operations, the main spring of action, the fundamental principle of pear cultivation, and the chief source of ultimate success; and so long as the pear and quince are adopted as stocks, the soil on which they are planted must approach as nearly as possible to the character of their respective *habitats*, particularly in the porousness or tenacity of its texture. THOMAS F. WALSH.

Boston, August 23, 1858.

For the New England Farmer.

CAN MOWING MACHINES BE WORKED WITH OXEN?

I wish to inquire if mowing machines have ever been successfully worked with oxen, and if so, which machine operates in that way the best?

Will it not require two men to work the machine, one to drive the oxen and another to manage the mower? I have heard of having oxen bitted so as to drive them like horses, but I think they would be apt to prove a rather hard-mouthed team; at any rate, I should not like to risk the machine until the oxen were pretty well broken to the bit.

I have thought some of getting a mower, provided this and some other objections can be overcome. I have long thought that an ox machine would be more useful to a majority of farmers than a horse machine, as the larger part keep only one horse, preferring to do their work with oxen; even if they had a one-horse machine, it would be too hard for a horse to mow during the forenoon; and then rake in the afternoon, besides being often wanted on the road.

Lancaster, Aug., 1858. OLD SUBSCRIBER.

REMARKS.—Mowing machines are often used with oxen, but we do not know which is best to be worked by them especially.

For the New England Farmer.

SAVE YOUR ASHES.

The *Germantown Telegraph* contains sensible remarks on the prevention of the potato rot, by the use of ashes or other alkaline substances. I have seen nothing more to the point. It is a remedy at the command of all. The application of a pint of ashes to each hill at the time of planting, or at the time of first hoeing, will not harm the potato, if it does not entirely save them from rot. I have great faith in the fertilizing power of good ashes, and believe they are worth more than they are commonly estimated at. Many of our most valuable products are made such by the application of ashes. And if they are found to be a specific remedy for the potato disease, which I believe to proceed from evil atmospheric influence, this will greatly enhance their value.

Although the Chenangoes are so far used up, as to be not worth digging, and some other varieties are badly affected, the Davis Seedling continues fair and bright, well rewarding those who were vigilant in obtaining the best of seeds.

I have seen of late a patent potato-digger, made by the Messrs. ALLEN, of New York, which promises to be a convenient and useful implement. If it shall prove to do as well as their mower has done, it will be worth having.

Sept. 1, 1858.

EDDY'S PATENT SELF-FEEDING STALL FOR HORSES.

It is an important item in farm economy to arrange the places where animals stand, lie and feed, so that there shall be comfort to themselves, convenience to the persons attending them, and no waste suffered in their racks or mangers. We have never yet seen a lean-to, or tie-up, for cattle, that we thought was in every particular right; and we never saw a horse-stall until to-day, that we could find no fault with.

Dr. EDDY invited us to-day to look into the "Club Stable," near the Revere House, Boston, with him, and see his stalls. We did so, and from our examination, are enabled to use the expression made above, that *we have seen a horse stall that we could find no fault with.* The Dr. states that by the above-named invention the following results are secured, and we pretty nearly believe all he says, viz.:

1. A horse may be fed without soiling his head or foretop with hay-seed or other matter.

2. He cannot breathe upon his hay, or soil it by constant mouthing, as in a common rack or manger, and thus render it unfit for use.

3. He can receive his hay *no faster* than it is taken away and eaten.

4. He cannot thrust his nostrils into a mass of smoky hay.

5. *He cannot waste a particle of his food.*

6. The stall is abundantly ventilated.

7. The cost of construction is less than the cost of the common rack and manger.

8. After the removal of the common rack the above improvement may be substituted in any stall at a very trifling expense.

9. The value of an individual right may be saved *annually* in the feeding of a single horse.

With the advantages which this improvement presents, there is no longer an excuse for a wasteful and slovenly method of feeding horses. *Greater simplicity, greater economy* and *greater neatness* can hardly be conceived than are realized by this invention. The individual who keeps a single horse *cannot afford* to do without it.

We advise every lover of a good horse to call and see these stalls.

For the New England Farmer.

BOOK-FARMING.

BY ICHABOD HOE.

Mr. Gilman made his beginning upon the hop-yard in the hardest part, but after the first few days' work, made much better progress, and before he finally got through with it, the hop-yard looked like a new creation. All the stones on or near the surface were needed in the drains, and many others were drawn from a large stone heap on one part of the field, which had grown, by the annual accumulation of years, to quite a mound. A single year was sufficient to convince Mr. Gilman that the labor upon the hop-yard was by no means lost. The second year it was no light job to draw a scythe through the tall, rank timothy and clover, that grew where before only worthless hassock and brakes had been found, and the acre which then had produced less than a ton of bedding hay, now produced more than two tons of the first quality.

This was a result quite beyond the anticipations of Mr. Gilman, and those parts of his fields which heretofore had been but eye-sores to him, he began to regard with much such feelings as an enthusiastic surgeon does a fracture or other wound, which gives an opportunity for the exercise of his skill. By being careful to obtain the best implements for use on the farm, and taking advantage of every improvement and invention for saving manual labor that came within reach of his means and circumstances, Mr. Gilman both lightened the labors of farming, and gained time to make great improvements upon his lands.

"Want to hire fifty dollars, du ye? It's jest as I told ye, this 'ere book-farmin's jest runnin' on ye inter the ground. What 'pon airth ye want fifty dollars for, neighbor Gilman?"

"I'm going to buy a mower and reaper that works by horse-power."

"What! goin' to give fifty dollars for one of them foolish consarns?"

"It will cost nearly a hundred dollars!"

"Hurderd dollars! why, yer crazy! I jest thought you'd come to that, readin' so many of them foolish ag'cult'ral books. I wonders ye haint in the poor-house 'fore now, layin' out so much for every kind of a notion that comes along—new-fashioned harrers and cultivaters, hay-cutters and sich things, and now ye'r goin' to throw 'way a hunderd dollars on a mower for that 'ar little farm of yourn!"

"Perhaps some of my neighbors may want to hire it once in a while."

"Ye needn't make any calc'lations of that sort on me; I wouldn't have one of the foolish things on my farm."

"Did you ever see one?"

"No! nor don't want tu—they're only jest got up by them crafty fellers that wants tu git their livin' by their wit, and git sich foolish folks as you are tu buy their good-for-nothin' inventions."

"You've been laughing at my foolishness, as you call it, but somehow, I have managed to raise more corn, more oats, more wheat, and more hay, too, than you have, with less than half the labor you have bestowed on yours.

"Wal, I know my crops has been purty light for a year or two past, but it's owin' tu the seasons—one was dry and the next was wet. These things is above our control, ye know."

"We can't control the season, to be sure, but these foolish notions of mine that you've been laughing at, have enabled me to raise good crops in wet or dry seasons, either."

"You may make your farm du so, but taint the nater of my land."

"It isn't owing to the nature of the land, as much as it to the nature of the cultivation. When I began upon my present system of cultivation, there wasn't any difference between my farm and yours, only in size. As you say, I don't think there is much danger of your using a mower on your farm, till you have got the surface a little smoother, and freer of rocks and stones than it is now."

"Wal, my farm is jest as nater made it, and I aint to blame for that, and my father was a good farmer, and he never heern of sich a thing as a cultivater, nor never dreamed of sich a thing as a mower; and I b'leeve it's all nonsense tryin' tu use one. Better save yer money for suthin' else. I haint got s'much money by me's I use tu have. These 'ere bad seasons has spiled my crops, and one thing or 'nother has took off a good deal of my loose change. I 'spect I've got suthin' like fifty dollars, and I 'spose if I don't let ye have the money, ye'll git it somewhere else, so I's goods let ye have it 's any body."

"Yes, I shall get it somewhere. But, Mr. Richards, why don't you take better care of your apple trees, and not let them die off so?"

"Me let 'um die! You talk as if you had power to control Providence. I 'spect trees must die as well as folks. These 'ere hard winters kills everything, and the apple trees 'mong the rest."

"Winter kill an apple tree! Why, an apple tree is as hardy as an oak tree! The fact is, Mr. Richards, if you had spent a dollar or two a year for a good agricultural paper, and taken ten minutes a day, or even two minutes, you would have found out what ailed your apple trees, and could have saved them healthy and sound. You wont have twenty bushels of good sound fruit in your orchard this season."

"No, they bloomed well, and the fruit sot harnsome, but, somehow, the fruit's all fell off. Wal, but what 'spect 'tis ails the trees, if 'taint the winter kills 'um?"

"Why, just come here, and I'll show you; if you'll just poke away the grass you'll see around this tree, close down to the ground, what it is."

"I don't see nothin' but the chankins the worms has made in the rotten wood."

"Ah, that's the very mischief. The borers have bored your trees into honeycomb, and the trees have died in consequence of it, and no wonder at it. See here, while I take this sprout and strip off the leaves! I'll show you how to dispose of the fellow that made this hole. There, you see by the end of the stick, that that has put a stop to that fellow's operations."

"Wal, now, that beats all, I vum! who'd a thought it!"

"Why, anybody that takes those foolish agricultural books would have thought of it, for there is a great deal said about the apple tree borer in them, and full directions given how to get rid of them. I have single trees in my orch-

ard, this year, that will bear as much as twenty bushels of marketable apples each. I've been offered three hundred dollars for my apple crop this year, with the privilege of reserving what I want for family use."

"Du tell! three hunderd dollars!"

"Yes, and I think that that will pay pretty well for agricultural books and papers for a spell, and for all the time spent in reading them, too, for if it hadn't been for them, I should have been as ignorant of what ailed the apple trees as you were, and mine would have gone the same way, too. Now I've got some trees that will bring in, one year with another, as much clear income as two hundred dollars would at interest, and I'm not afraid of my income's being cut off by the failure of all the banks and railroad companies in the country."

"Hang these 'ere companies! I've lost suthin' by 'um fust and last, but they wont git no more of my money, for if times don't change, I shan't have much left. I tell ye what, neighbor Gilman, I guess I shall go to work and take care of my trees, and kill off them 'ere borers. We'll go up to the house, and I'll git ye the money."

[It appears by the above that Mr. HOE has not *hoed his row out yet*, and as the work is very well done as far as he has gone, we hope he will be diligent in well doing until the job is fairly completed.]

For the New England Farmer.

A NEW FRUIT TREE PROTECTOR.

An invention has lately been brought into notice by WM. W. TAYLOR, Esq., of South Dartmouth, which bids fair to supply the want of what all tree and fruit cultivators have most sensibly felt the need of, namely, a reliable protector from the ravages of the canker worm and other destructive insects, of which there are in Massachusetts alone, according to Dr. Harris, no less than 4800 species.

This invention consists of a circular iron cup cast in two semicircular sections, with flanger and screws so moulded as to be perfectly water-tight when joined together. Between the cup and the tree a packing of sea-weed, straw, or any other suitable material, is placed sufficiently tight to prevent the passage of insects. An umbrella-like screen is suspended about two inches above the cup, which prevents the accidental lodgment of leaves. The cup is then filled with bitter water which will not freeze in the coldest winter, and being deliquescent, will not evaporate. This circle of bitter water around the tree is an impassable barrier to every insect. A friend of mine invited me a few days since to drive over and see the operation of these cups in his orchard. I was surprised to find that though the cups had been placed on the trees only a few hours, that they were half filled with canker worms and other geometræ, and any quantity of aphides.

Some of these worms appeared to be pretty sensible fellows in the main, for great numbers having climbed to the edge of this gulf of distruction, had wisely adopted the policy of a *masterly* inactivity, and had gone into winter quarters; hoping, perhaps, like Micawber, that something would turn up in the spring; and they had wisely suspended themselves in cocoons, like so many barnacles, on the iron cup and trunk immediately beneath. There they hung like so many monuments of *misguided* ambition. Now when these hatch, the young having no nourishment, must die of famine. The canker worm, which is the especial pest of our northern orchards, ascends the tree in the fall, and during the mild spell of a moderate winter, and laying about sixty eggs, drops into the ground and dies. This new swarm hatches in due time, and when it is too late to apply a remedy, the farmer finds his orchards blighted, and his hopes of a good fruit season destroyed.

This invention of Captain Taylor completely heads them off, as these cups of dead worms and cocoons beneath show, and if applied in the early fall, they act as an efficient insurance against their insidious attacks. Many farmers in this vicinity have tried it, and are thus far more than satisfied with the result. Look out for a large fruit crop from old Dartmouth next year.

New Bedford, 1858. AGRICOLA.

URINE.

Some years since, an experiment was made in Flanders, which went far towards ascertaining the value of urine when applied as a stimulant of vegetable life. A box of fine, white sand was exposed to a heat sufficiently intense to dissipate its moisture, and thoroughly to destroy every particle of organized matter it contained. It was then placed in a dry situation, and some seeds of Egyptian wheat being planted in it, the whole mass was saturated with urine in a state of incipient putridity. The result of this experiment was that the wheat vegetated, grew rapidly through the season, and in autumn, rather before the maturation of the same grain in the open fields, produced a heavy yield of fine and perfectly developed grain.

Of cow's urine, according to analysis of BRANDE, contains in 100 parts:

Hydrochlorate of potass and ammonia	1.5
Sulphate of potass	0.6
Carbonate of potass	0.4
Phosphate of lime	0.3
Urea	0 4
Water	96 8
	100.0

Urine of the horse, analyzed by Vauquelin, gave:

Hydrochlorate of potass and ammonia	1.5
Sulphate of potass	0.6
Carbonate of potass	0 4
Phosphate of lime	0.3
Urea	0.4
Water	96.8

Most farmers are now so well convinced of the value of liquid manure, that they take more pains than formerly to preserve it. They have not only placed cellars under their barns, where it falls, when dropt, upon meadow muck, saw dust, loam, refuse hay, leaves, or other matter, where it is soon absorbed and saved from evaporation,—but

some have sunk tanks, or wells, into which it is led by gutters, and after passing through the putrefactive process, is conveyed to the fields and sprinkled upon grass or other lands as it is needed.

This process is highly commended by some who practice it. It seems to us, however, that where meadow muck is abundant on the farm and there are high lands of sandy or gravelly loams that need dressing, that a cheaper, easier and more beneficial way would be to let the droppings fall upon old, finely-pulverized meadow muck. This not only absorbs all the urine, holding its virtues most tenaciously within its grasp, but every cord of muck applied to such lands as we have mentioned is nearly equal in value to a cord of the common barn-yard dung.

Sir John Sinclair, an English writer of celebrity, speaking of the value of this article as a fertilizing agent, says :—

"Every sort of urine contains the essential elements of vegetables in a state of solution. The urine of a horse being so much lighter, would be more valuable than its dung, if both must be conveyed to any distance. The urine of six cows or horses will enrich a quantity of earth sufficient to top-dress one English acre of grass land; and as it would require 4*l.* worth of dung to perform the same operation, the urine of a cow or horse is worth about 12 shillings per annum, allowing 8 shillings per acre as the expense of preparing the compost. The advantages of irrigating grass lands with cow urine almost exceeds belief. Mr. Harley, of Glasgow, who keeps a large dairy in that town, by using cow urine, cuts some small fields of grass six times; and the average of each cutting is 15 inches in length."

For the New England Farmer.

NEWLY FOUNDERED HORSES.

Mr. Editor:—Having had considerable experience with foundered horses, I will give a condensed account of one case through your paper. When but a youngster, and inexperienced, I drove a horse rather hard, and perhaps gave him water too soon, and fed rye bran at night. Whether it was the water, the hard driving or the unaccustomed feed that stiffened the horse, I am unable to say; but in the morning he fell in coming out of the stable, and was unable to use his limbs. I called a horse-farrier, who said he could cure the horse, but should keep secret what he did unless I would give him ten dollars for the knowledge of his mode of treatment. I told him if he cured the horse I would give him a private receipt that was valued at fifty dollars, that would be very beneficial in his business. This he accepted, and went to work. He first gave the horse all the salt he would eat, saying that if he did not eat freely he should dissolve some and turn it down. He next bled in the warts upon the forward legs, having pealed them down thin and oiled them. The bleeding was performed by my holding up one foot, while he pinched the wart upon the other leg with his thumb and finger, then running a small, sharp knife-blade into the middle of the wart and up under the skin and upper part of the wart, about one inch and a half, taking care not to touch the inside skin over the bone. He did the same to both legs. There was but little blood came from either. We next commenced rubbing the legs and moving the horse about, and as soon as he thought he would not fall we put him before the wagon and started off upon the road. As soon as he began to warm up he improved rapidly, and by the time he had gone six or eight miles he went as well as ever he did, and never after showed any signs of founder. Dux.

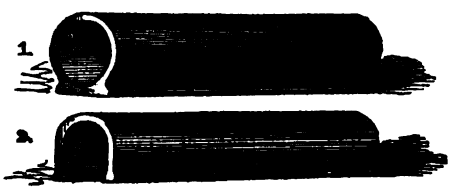
Plainfield, Aug., 1858.

For the New England Farmer.

UNDERDRAINING.

Various materials have been used in drains for conduits, but none with such success and at so small cost as the pipe-tile. All other kinds are more liable to be stopped by roots of trees, burrowing of small animals, washing in of earth, gulleys worn in the bottom, breaks in the continuity, &c., &c. The expense of tile drains is much less than those formed of any other material, unless more is paid for the transportation of tile than their original cost at the manufactory.

The process of tile manufacture is as follows: after the clay has been properly ground it is shoveled into the tile machine and pressed out, by a piston worked with screw or cogwheel, through dies formed in the shape required for the tile, and run off on canvassed rollers, three or four side by side, in lengths of five or six feet; these strips are cut into the proper lengths, usually fourteen inches, by the single act of lifting a frame, to which wires are attached at small distances, which cut through the soft clay, and leave the tiles ready to be carried away to dry for burning; when sufficiently dried, they are placed on end, in a kiln made for the purpose, and fire applied until they have acquired about the color of good, red brick. Tiles are now furnished in Boston at the following rates:



Sole or pipe tile, in form as figure No. 1:

1½ inch.....$10,75 ℔ M.	3 inch.....$21,50 ℔ M.
2 inch.....13,25 "	4 inch.....34,25 "
5 inch.....$48,50 ℔ M.	

Horse-shoe tile, in form as figure No. 2:

2½ inch.....$13,50 ℔ M.	3½ inch.....$17,00 ℔ M.
5½ inch.....$33,50 ℔ M.	

For sewers of small size, or for drains exposed to the action of frost, and for conducting pure water, the vitrified stone ware drain pipe is used with great success; it is made of the best material, and is entirely proof against all corroding agents. This pipe is very different from the

red clay socketed and glazed pipe often seen, being formed of Jersey stone ware clay, well ground and pressed through a strong machine at an expense of great power, and burned in the kiln until vitrified; it is also glazed in the kiln by vaporized Liverpool salt when the pipe is at a white heat. These pipes are sold in Boston in two-feet lengths at the following prices:

No. 1, plain Pipe. No. 2, Double Joint. No. 3, Elbow.

2 inch, socketed.....11c ₱ ft.		6 inch, socketed.....30c ₱ ft.	
3 inch, " .....14c ₱ ft.		8 inch, " .....45c ₱ ft.	
4 inch, " .....17c ₱ ft.		9 inch, " .....56c ₱ ft.	
5 inch, " .....23c ₱ ft.		12 inch, " .....90c ₱ ft.	

Elbows and double joints, double price per foot. The manufacturers of this article will make any shape or size to order; on account of the ease with which this material can be worked, it can be adapted to many useful purposes on a farm; one of which is in making "peep holes," by which to examine tile drains. Another very useful purpose is in conducting spring water to the house and barn, for which is used a pipe of one inch bore in two feet lengths, with separate collars. This size is sold at 6 cents a foot, including collars. It is capable of bearing the pressure of 150 feet head of water.

No. 1 represents the Pipe. No. 2, the Collar.

This form, viz., the cylindrical pipe with collars, is, undoubtedly, the best for pipe tile, to be used in underdraining. It is in extensive use in England, and its manufacture is now begun in this country.

Water can get into the pipe-tile very freely at the joints, as may be seen by a simple calculation. It is impossible to place the ends so closely together, in laying, as to make a tight joint on account of roughness in the clay, twisting in burning, &c., and the opening thus made will usually average about one-tenth of an inch on the whole circumference, which is, on the inside of a 2 inch tile, 6 inches, making six-tenths of a square inch opening for the entrance of water at each joint. In a lateral drain, 200 feet long, the tiles being 13 inches long, there will be 184 joints, each joint having an opening of six-tenths square inch area, —in 184 joints there is an aggregate area of 110 square inches; the area of the opening at the end of a 2 inch tile is about 3 inches. 110 square inches inlet to 3 inches outlet; 37 times as much water can flow in as can flow out. There is, then no need for the water to go through the pores of the tile, and the fact is, I think, quite fortunate, for the passage of water through the pores would in no case be sufficient to benefit the land to much extent. I tried an experiment by stopping one end of an ordinary drain pipe, and filling it with water; at the end of 65 hours water still stood in the pipe, three-fourths of an inch deep.

How large an area a certain sized pipe will drain is a question into which enters a great many elements; among which are the following: Amount of rainfall, per centage of evaporation, perviousness of the soil, amount of drainage area beyond that occupied by pipes, amount of fall which can be given to the drain, friction of water with inside of pipe. It will be seen at once that it is impossible to lay down an arbitrary rule for all cases, though the area may be determined for each case by itself. The practice of extracting the square root of the drainage area in acres, to find, roughly, the diameter in inches for the main drain of any system, has been used in England. The rainfall there is about two-thirds the amount in New England, but the amount of evaporation here is double the amount there. Again, in England the fall of one inch, vertical depth, of water would be considered a great rain; here a rainfall of three or four inches, vertical depth, is not uncommon. Other things are different in the two countries, so that the rule if safe in England might not be so here. In the average of conditions in New England, I think the addition of one inch to the result obtained by the English rule would give a good diameter of pipe for the work; for instance, suppose 9 acres are to be drained, square root of 9 is $3 \times 1 = 4$. 3 inch pipe to drain 9 acres in Old England, 4 inch pipe to drain 9 acres in New England; but this result is by no means safe for all cases.

If space permitted, I would show, by calculation, what amount of water certain sizes of pipe, under certain conditions could discharge. I will give one result with a 2 inch pipe having the least fall at which it is likely to be laid—i. e., 3 inches fall in 100 feet—velocity 0.895 feet per second—will discharge eleven thousand four hundred gallons a day. J. HERBERT SHEDD.

Boston, Sept. 14, 1858.

For the New England Farmer.

FARMERS' SONS AS SCHOLARS.

MR. EDITOR:—For proof of the fact that the laboring classes are endowed with an intellect of a superior order, and that labor strengthens and develops the mind, we have but to go into our colleges and seminaries of learning, and tell me if you please who stands first in scholastic degree among his fellow-students, not only first in his class, but also in the literary society to which he belongs? And also first in the estimation of his instructors, and first in the love of all his classmates? Is it the youth who has grown up from infancy to manhood without ever feeling that industry was an essential part of his education, without feeling that he must needs labor for a livelihood without ever knowing by experience the truth of the injunction, "In the sweat of thy face shalt thou eat bread?" Is it the child of wealthy parents who have spared neither pains nor expense in the perfection of his education, who have afforded him every facility possible in the way of books and private instructors, and have carefully trained him along the beaten path of learning, from the primary school up to the very doors of the college, and who take care

that he shall not want for means to satisfy both his physical and mental wants? Is this the youth who is to come off victorious in the strife for collegiate honors among his fellows? By no means. Ten chances to one if it is not some humble farmer's son or some charity student who during the whole course of his studies has had to struggle against almost every difficulty; who has been pinched for means to satisfy his necessary wants, both physical and mental. He studied because he loved to study, because he felt the value of learning; while the son of luxury studied because he was driven to his books, because the pride of his parents required that he should receive the form of an education, if nothing more.

And the difference does not end here; if the son of luxury cannot sustain himself even in college, as he advances in life we behold a still greater disparity between him and the son of toil; the former having received his diploma, uses it as a passport to success and as a letter of introduction to refined and intellectual society. The luxurious and effeminate habits which he acquired during his youth are rarely to be shaken off; they, on the contrary, increase in strength and intensity, and incapacitate him for usefulness of any kind whatever, and the succeeding generation buries him and his deeds beneath the wave of oblivion.

The son of toil lays his diploma aside, and goes to work as though he had it not, and is judged according to his merits by the ages yet to come.

I hope the day may come when our farmers and laborers shall rank first in point of education among the people of the land; when every farmer shall not be afraid to compare his education with any college graduate. Then will labor really be honored, and our laborers be truly our nation's strength, the safeguard of our liberties and our country's pride. Euler Norcross.

South Hadley, 1858.

THE ANTHRACITE COAL TRADE.

Thirty-one years ago the first coal went to Philadelphia, being ten wagon loads hauled over the mountains by George Shoemaker, of Pottsville. Very few persons could be induced to purchase it, and most of these were wholly unsuccessful in their attempt to make it burn. Everybody considered it a mere stone. Mr. Shoemaker was denounced in all quarters as a cheat, and measures were being taken to arrest him for swindling; but he escaped arrest by leaving the city by a circuitous road, and did not stop until he had got thirty miles on his homeward journey. The most remarkable feature in this extraordinary speculation was, that Mr. Shoemaker did not himself know how to make the coal burn. He was therefore unable to convince the public that it really would ignite. Had he experimented at home, and brought with him a grate or stove in which to kindle a successful fire, the exhibition would have, no doubt, hastened full ten years the development of the coal business. He reached home disgusted at the belligerent temper of the citizens, and heart-sick at the ill success of his adventure. His reputation as an honest man was rescued, however, by an iron master in Delaware county, into whose hands some of the repudiated mineral accidentally fell. He tried the coal, caused it to burn freely with an intense heat, and was so pleased with it that he proclaimed the fact in the newspapers. This led others to try, and they also succeeded, the prejudice was removed, and consumption went on from this disastrous beginning, until it last year reached the enormous quantity of 3,476,862 tons. But up to this date the depression of manufacturing has caused a reduction of 300,000 tons to be sent to market, and the whole year undoubtedly shows a falling off of full 600,000 tons.—*Miner's Journal.*

For the New England Farmer.

OLD FASHIONED BUTTER STOCK.

Forty years ago, a cow that yielded two pounds of butter a day, with a little cream for the table, was looked upon by such men as Lowell, Derby and Parsons, as extraordinary, and worthy of special admiration. From six to eight quarts of her milk were said to have produced a pound of butter. Now we hear of animals being bred to order, that will produce double the quantity of butter, from the same quantity of milk. I have never met with such animals, nor have I ever met any well attested statements of such products.

As the season for shows is near at hand, it is well to recur to first principles, and to guard against being misled, by cunningly devised fables of any kind. When I meet with a cow that does as well as the one first mentioned, I am satisfied she is a good cow, whatever may be her breed, and I doubt whether any of the fancy stocks will do better.

LETTER FROM MR. BROWN.

A DAY ON THE STATE FARM.

Westboro', Mass., Sept. 1, 1858.

Dear Sir:—Business, as well as inclination, leads me to various portions of our good State, and occasionally into other States, where I mingle freely with the farmers, observe their practices, stock, crops, modes of living, &c., and get new facts and new courage myself as co-workers in the progress of rural art. I have passed today on the *State Farm*, in this town, and it is an interesting day's work to look at the improvements which have been made upon it, at the stock and crops, and the school of reformation which is established upon its grounds.

The farm is managed by the State Board of Agriculture, under the superintendence of Dea. Samuel N. White, a gentleman of large experience in agricultural matters, of sound judgment, and strongly imbued with the spirit of progress and improvement.

The farm consists of 285 acres, divided into 80 acres of plowable or tillage land, 36 of natural mowing, or meadow, 40 of woodland, including 19 acres of swamp, and about 129 acres of pasture land. The soil is varied, some of it being light and sandy, probably once covered with a

heavy growth of pines, while other portions are of granitic formation, and now so filled with rocks as to make it nearly worthless for purposes of cultivation; the natural mowing and swamp lands will only become valuable for cultivation when they can be thoroughly drained and reclaimed.

I found the crops generally appearing well, and, all told, there were a good many acres under cultivation; such as 19 acres of corn, 4 acres of fodder corn, 13 acres of potatoes, 10 acres of carrots, beets, and other roots, 3 acres of beans, and 4 acres in garden, covered with onions, cabbages and other vegetables. I also found that the farmer has harvested 10 acres of oats, 5 acres of winter rye, 2 acres of wheat, 1½ acres of barley and 2 acres of millet, all of which were of the first order of crops. One hundred and three tons of hay, all weighed, has been cut and secured, and there is a present promise of a considerable second crop. The farm affords a variety of fruit, and I have seen to-day in my rambles over it, the finest crop of peaches and pears that I have met with this season. The high lands seem admirably adapted to the apple, several varieties of the pear and strawberries, and I am sorry not to see more attention given to the cultivation of the apple, where there is such a demand for them as is presented in the watering mouths of five or six hundred boys! The institution on the farm is not a *penal*, but a *reformatory one*, and I know not how a wild and untutored boy can be brought under submission in any better way than by the kindness he receives within those walls, accompanied with a proper supply of wholesome fruit! If the officers of that institution have learned that kindness is better than stripes, the progress of inquiry would satisfy them that an abundance of fruit in their hand would become first a *tamer*, and then a *civilizer!*

In looking at the stock belonging to the farm, I found 12 noble oxen, 25 cows, 5 horses, and an Ayrshire, Hereford, and Alderney bull, each being a full blooded animal, together with 8 head of young cattle; in all, 54 head. Among them are the Hereford, Durham, Ayrshire, Devon and Alderney stock. In the capacious and convenient piggery, I found 105 swine, many of which were of fine form, and most of them of Suffolk and Mackay blood. Since the farm has been managed by the Board of Agriculture many valuable improvements have been made upon it, some of the most important of which, such as draining with pipes and stones, and the removal of vast quantities of boulders and imbedded rocks from the fields contiguous to the highway, cannot be appreciated by the beholder unless favored with the lucid descriptions of Dea. White or some one who witnessed the operations of improvement. I saw one field containing several acres, originally one of the roughest and most forbidding of our New England pastures, that had been trenched to an average depth of 12 inches, and a large portion of the rocks buried, so that the trenching in many places was three or four feet deep. This land is now covered with fine crops. The intention is to appropriate it to apple trees. This trenching, as well as a large proportion of the other work on the farm, is done by the boys from the school, who labor in gangs, or lines, directed by overseers who work with them, and lead the way.

But what means that solemn peal from the great bell in the East Tower? It is

A FUNERAL FROM THE REFORM SCHOOL.

The officers and ladies of the household, and the boys from their avenues, all turned to the Chapel in the centre of the vast pile of buildings, and when I entered, were seated. In front of the chaplain, and directly before the boys, was the coffin containing the body of a little boy only ten years of age, who had suddenly died of heart disease. The silence of this impressive scene was broken by the voice of the chaplain, who said, "we will chant the 23d Psalm," and then, led by an instrument and the firm and manly tones of his voice, in subdued utterance they chanted with touching pathos—

"The Lord is my shepherd: I shall not want.
He maketh me to lie down in green pastures:
He leadeth me beside the still waters.
He restoreth my soul: He leadeth me in the paths of righteousness for His name's sake.
Yea, though I walk through the valley of the shadow of death, I will fear no evil: for Thou art with me; Thy rod and Thy staff they comfort me.
Thou preparest a table before me in the presence of mine enemies: Thou anointest my head with oil; my cup runneth over.
Surely goodness and mercy shall follow me, all the days of my life: and I will dwell in the house of the Lord forever."

A brief description of the deceased, his sickness, and death, and a short and fervent prayer, which seemed to find a beating chord in every heart, closed this part of the service. The boys, all barefooted, for the weather was hot, then noiselessly filed by the coffin and took a parting look at all that remained to them of their late associate, so suddenly and unexpectedly taken from their midst. Well might they exclaim in the feeling language of Grey—

"One morn I miss'd him on the accustomed hill,
Along the heath, and near his fav'rite tree:
Another came; nor yet beside the rill,
Nor up the lawn, nor at the wood was he."

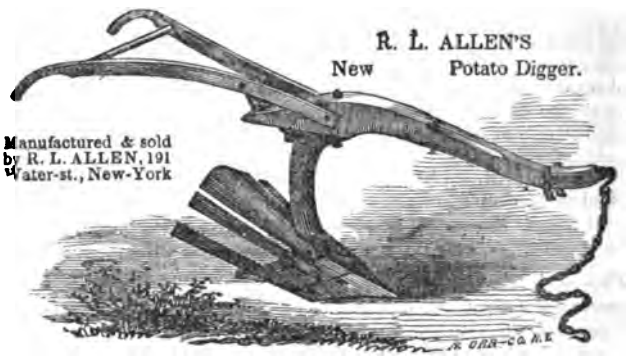
Headed by the bearers, and bier, and followed by the Trustees of the School, who happened to

be there, the 560 boys, the ladies connected with the Institution, and its officers, the procession moved silently along to the shores of a beautiful pond in the centre of the farm, where there is a cemetery laid out in excellent taste. A receiving tomb has been prepared in the steep hill-side, and over it, and along the slope of the hill, young oaks stretch their friendly branches, and sing their requiems over the dead. The bier was set down, the boys arranged eight deep in lines on the margin of the pond, while visitors, officers and ladies stood upon the higher ground over the tomb. The chaplain, his wife and one of the officers sang an appropriate hymn, their rich, full tones rolling over the water and returning in sweet echoes, seemed to bear all our souls into a heavenly world. One of the bystanders then spoke of death, saying that although it is a solemn thing to die, yet, as it is an ordinance of God, it is for our best good, and that slavish fears of it should not mar the rational enjoyments of life; he spoke of the regard which all good people have for age and for their dead,—of the great improvements and the refined taste which has been manifested in the preparation of places of burial, and expressed a hope that the spot, now for the first time occupied, would become an object of their interest and olustering affections, and be beautified by their skill and care. He spoke of the last Sabbath lesson of the deceased, which was among the latest injunctions of the apostle, to "*Love one another,*" and told them, if it was sincerely obeyed, that the grace of God would stream into their hearts as His beautiful sunlight was then streaming into that sacred and quiet spot, and prepare them to meet death in calmness and peace. A short and expressive burial service, and a fervent prayer of few words closed one of the most impressive funerals that I ever attended. Heavy clods falling upon the coffin, gave evidence that dust was committed to dust, and that life's fretful fever with the occupant of that narrow house was over. I turned from the scene with subdued feelings, and pondered upon life's sorrows and joys as I watched the last rays of the sun sink away from my sight.

Very truly yours, Simon Brown.

Joel Nourse, Esq., Boston.

Fine Plums.—We find pleasure in the acknowledgment of a box of fine Drap d'Or Plums, from the garden of E. C. Purdy, Esq., of Somerville. Mr. Purdy's skill in the garden, as well as his teachings through these columns, are worthy of attention.



ALLEN'S POTATO DIGGING PLOW.

We have already an implement for cutting, dropping and covering the potato by horse power, and implements for cultivating and hoeing them. Now we have before us an illustration of one for *digging* the potato, and as the latter operation is a slow, back-aching process, the digging plow will be hailed with pleasure, if it proves to be really a practical implement. We have not seen it in operation, but incidentally learn that it has given such satisfaction as to cause a very considerable demand for them. In a circular before us, Mr. Allen says:—

"This implement weighs only 85 pounds, is of light draft and simple in construction. A pair of small horses or oxen, with a lad to drive, will easily dig potatoes as fast as twenty men can pick up. It turns them out so clean that scarcely one bushel in fifty, whether small or large, is left uncovered. This is a most important advantage. The standard is so high as to allow of its working freely without clogging from weeds and potato vines. It works well on side-hills, in all soils, and among stones and stumps.

DIRECTIONS FOR USE.

1. Gauge the clevis so that the plow share will run directly under the potatoes. Keep the point of the share as near the centre of the hills or row as possible. The soil and potatoes are by this means turned completely over, leaving the latter on the top.

2. If the vines are long and green they should be cut with a scythe within six inches of the ground; or what is much cheaper and quicker, drag them with a dull iron harrow, and then dig with the plow. When the vines are dead, cutting is unnecessary.

3. If the soil is a stiff clay or somewhat wet, the potato digger may work better with the centre prong or arm taken off, or with a narrower one, which I can furnish to order, or any blacksmith can make."

Sold by R. L. Allen, 189 Water Street, New York. Price $10.

Opposition.—"A certain amount of opposition," says John Neal, "is a great help to a man." Kites rise against the wind, and not with the wind; even a head wind is better than none.

No man ever worked his passage any where in a dead calm. Let no man wax pale, therefore, because of opposition; opposition is what he wants and must have to be good for anything. Hardship is the native soil of manhood and self-reliance. He that cannot abide the storm without flinching or quailing, strips himself in the sunshine, and lies down by the wayside, to be overlooked or forgotten.

CLOVER.

Clover has an importance to farmers which can scarcely be over-estimated, and we fear it does not receive sufficient consideration. As furnishing a large amount of excellent pasture and fodder for domestic animals, and as a means of keeping up the fertility of our farms when plowed under, it deserves a prominent place in the system of rotation adopted by those who follow either a mixed or a grain-growing husbandry. As a general rule every acre of winter grain should be "seeded down," as it is termed, to clover in the spring, to remain for at least one, and not more than three years, as a meadow or pasture.

The soil best adapted to the clover plant is that of a somewhat clayey character—such as will produce the best wheat crops. Any soil which will grow wheat will also produce clover. A deep, well-drained loam suits it well—on all ill-drained soils it suffers much from winter-killing, especially if the spring prove one of little snow and variable temperature. On light soils it needs the assistance of manure to prove profitable.

Clover is usually sown early in spring upon winter grains, and occasionally with oats and barley. With the latter it generally does well, especially if sown in good season. Upon wheat, we sow in March, when the season is sufficiently advanced to do so. While the light frosts continue, the slight cracking and heaving of the soil, through their action, will generally furnish a sufficient covering for the seed, though some recommend sowing later and harrowing in, arguing that this process not only covers the clover more perfectly, but benefits the wheat crop. When seeding with spring grains, it is usually sufficient to pass over with the rollers, sowing the clover-seed after the last harrowing.

The benefit which clover derives from plaster seems a "fixed fact in agriculture," not needing special remark in this connection. Hence they have become associated in the minds of most of our farmers as partners in the product desired, and the one usually accompanies the other. We think, however, that the sowing of plaster upon wheat fields seeded to clover is frequently deferred too late. The clover needs its aid when it first comes up, besides if sown late, the wheat is injured by its causing too rank a growth of straw at the time when the grain is forming. We should sow plaster as early as April, if possible, upon wheat, and upon spring grain seeding as soon as it fairly appeared above ground.

The amount of seed necessary for an acre depends upon the character of the soil, but there seems no disposition to seed too heavily. Loamy soils need less than clayey, and the growth of the crop with which it is seeded, whether large or small, has considerable influence. A peck to to the acre is little enough—some use more, but many less. It is poor economy to sow but half enough to cover the surface—the pasturage and hay are of much less value, and the saving of five dollars in seed often entails a loss of five times that amount in the product.

There are many varieties of the clover plant, but those most grown are the common red, or Northern clover, of which we believe there are two varieties—the large, or pea-vine clover, and the medium—as it is called, perhaps, from its lying between that and the Southern or small variety. The medium kind makes the best hay, and is equally valuable as a green manure.

We have already remarked upon the great value of clover for this latter purpose. Some of the reasons why it is so may be thus briefly stated. Clover takes less from the soil and more from the atmosphere, in proportion to the feeding and manuring value of its product, than most other plants. It has numerous roots, long, bulky stalks, and abundant leaves, each supplying vegetable matter to the soil. A luxuriant growth of clover is an excellent preparation for any and every crop. Its far spreading roots loosen and deepen the soil, and bring to their support and to the surface the elements of fertility below the reach of most other crops. This, too, is the reason why clover delights in a deep, fresh soil, and why, after subsoil plowing, it is so certain to succeed.

Other considerations in regard to clover might appropriately be presented, and may form the subject of another article.—*Rural New-Yorker.*

For the New England Farmer.

ABOUT LIGHTNING RODS.

MR. EDITOR:—In the July number of the *Farmer* I notice an article recommending Lyon's patent copper lightning conductor;-which article also contains a statement of Professor CHARLES DEWEY, of Rochester, N. Y., to the effect that—"It is agreed by philosophers that the conduction of copper is from six to eight times that of iron, and that in either metal the conduction is dependent upon the surface, and not upon the solid contents of the metal," &c.

Now the matter of lightning rods is of very great consequence to the farming community, especially in this vicinity, where scarce a summer passes but more or less valuable property falls a prey to this subtle element. Yes, hundreds and even thousands of dollars worth of property are destroyed every summer in our own town. And since this is the case, is it not of vast importance that the community should be furnished with definite knowledge as to the means of protecting their buildings from the effects of lightning, both as regards the best, and the cheapest way, and not be left to choose between the conflicting statements of a score of lightning-rod peddlers, who are themselves as ignorant of the principles of electricity as most farmers, to say the least.

The principles that govern the electric element are well established, and hence may be known by every one who will take the pains to inform himself. In Franklin's time a good substantial iron rod, fastened to the building with saddles of wood instead of glass fixings, such as any man might put

up for himself, was deemed all sufficient to carry harmlessly to the earth any shock of lightning that might seek a passage. And I may here say, that I am yet to learn that that rod has ever proved false to its trust when kept in proper repair. But the work of the great discoverer and philosopher has been superseded by a multitude of new inventions, with the pretended discovery of new principles. I doubt the principle of Prof. Dewey's statement, for many reason which I have not space to give. But if it be true that surface is all that is required in a good lightning conductor, then will not some one please give us an answer to the following points:—1. If surface is all that is necessary, will electricity ever leave a metallic surface for any other passage, such as wood, any more than water will turn from a downward course of its own accord and flow up hill? 2. And if not, what is the use in passing the rod over glass, since in every shower said sheets would be covered with water, which is of itself a good conductor? 3. Therefore, why not dispense with glass fixings altogether? And 4, since metallic surface is all that is necessary, why cannot every farmer furnish himself with a lightning conductor possessing double the surface of Lyon's rod, (since the thinnest sheet of copper is as good as the thickest, no matter if it is as thin as paper, fastened to a strip of pine board, is all that would be required,) at an expense not exceeding one-fifth the expense of Lyon's rod?

Again, it is stated by Prof. Dewey, that copper has from six to eight times the conducting power of iron. This statement is at variance with that of Mr. Davis, of Boston, in his Manual of Magnetism, page 38, where he states the conducting power of the two metals as follows: copper 17,050 grains; iron 7,800 grains. Now that does not look like six or eight to one. Who is right? We want more light; we want definite knowledge upon this subject, and less of that cutaneous affection called guess-work. L. Baker.

East Templeton, July 30, 1858.

HOW COFFEE CAME TO BE USED.

It is somewhat singular to trace the manner in which arose the use of the common beverage, coffee, without which few persons, in any half or wholly civilized country in the world, would seem hardly able to exist. At the time Columbus discovered America it had never been known or used. It only grew in Arabia and upper Ethiopia. The discovery of its use as a beverage is ascribed to the superior of a monastery, in Arabia, who, desirous of preventing the monks from sleeping at their nocturnal services, made them drink the infusion of coffee, upon the report of some shepherds, who observed that their flocks were more lively after browsing on the fruit of that plant. Its reputation spread through the adjacent countries, and in about 200 years it reached Paris. A single plant brought there in 1714, became the parent stock of all the French coffee plantations in the West Indies. The extent of the consumption can now hardly be realized. The United States alone annually consume it at the cost of its landing of from fifteen to sixteen millions of dollars. You may know the Arabia or Mocha, the best coffee, by its small bean of a dark yellow color. The Java and East Indian, the next in quality, are larger and of a paler yellow. The West Indian Rio has a bluish or greenish, gray tint.

For the New England Farmer.

SHEEP AND FLEECES.

Mr. Editor:—There is a statement going the rounds of the papers, of the great weight of fleeces sheared by J. Smart, and others, of Vermont, which I am very glad to see. It shows that there are some, at least, who are trying to improve the quantity, and it is to be hoped, at the same time, the quality of their wool. A desideratum, certainly, for us New Englanders in this progressive age, when almost everything the farmer grows, except wool, is so much higher than formerly.

It cost but little, if any, more than half as much per head to keep sheep thirty to forty years ago, as it does at the present time. Then, good Spanish merino wool brought from sixty to eighty cents per pound. Hence the necessity of many fleeces to make wool-growing a profitable business, was not so great as it is now. The cost per head of keeping a flock of sheep, that will shear four pounds of good wool, is but a trifle more than that of one that will shear but half that amount. And with the present prices, and future prospects, the greatly increased cost of keeping, the necessity of many fleeces, together with good quality, is but a too self-evident fact to all intelligent wool-growers of New England, as the difference in the prices paid for heavy or light fleeces is comparatively nothing.

My sheep were poorly fed the first year, not one of them having anything more than ordinary keeping. I sheared 108; they were all well washed—in fact the cleanest that I ever saw a flock. I did not keep an account of the weight of fleeces, but should not be willing to sell it for anything less than five pounds per head. I weighed several yearlings' fleeces that weighed from six to six and three-fourths pounds each. I sheared two full blood Spanish Merino bucks, that made nine and one-half pounds each; and one three years old that sheared twelve pounds; and one three-quarters blood Spanish and one-quarter French Merino, two years old, that sheared eleven and one-half pounds, and as to quality and condition, I am willing to compare it with any in Vermont. J. B. Freeman.

Lisbon, Grafton Co., N. H., 1858.

For the New England Farmer.

RE-SHINGLING OLD ROOFS.

Mr. Editor:—I noticed in your paper some remarks from the pen of J. T. Adams, Esq., on re-shingling old roofs. He says his method is to shingle over the old shingles, thus saving the expense of removing them. In most cases the old shingles will pay for removing for our ladies to kindle fires. To obviate the difficulty of getting the building wet, if it should rain before it is finished, no more shingles should be removed than can be replaced by new ones in a short time. As for the roof being much warmer and tighter, I very much doubt. If the roof is properly covered, no snow or rain can beat under the buts of the shingles. As for the roo.

lasting one-third longer by allowing the old shingles to remain on, I think every practical man will differ from Mr. Adams, for if the old ones be left on in case of heavy rains, the old shingles, as well as the new ones, will get saturated with water. The old ones will retain the water for a long time, consequently, they will cause the new shingles and also the boards underneath to decay. My method is to remove the old shingles and replace them with new in a neat and workmanlike manner; and I believe it will cost less and will look much neater than if the old shingles should be allowed to remain on.

HENRY CROWELL.

Londonderry, N. H., 1858.

BUILDINGS AND FIXTURES FOR A 100 ACRE FARM.

"What Buildings and Fixtures are required for farming, profitably, one hundred acres, including timber lot, managed in the usual way of grain-growing and stock-raising combined?"

There is required a pleasant and commodious dwelling, with parlor, dining-room, sleeping-rooms, closets, kitchen, cheese-room, pantry, wood-house, cellar, cistern and well—all constructed in accordance with the best improved taste and judgment of the proprietor. Also, a barn 42 by 52 feet, elevated two feet from the ground on the upper side, having on one side of the barn floor stalls for horses, each 4½ by 14 feet; an apartment joining, for a cistern, at the further end of the stalls, 6 by 14 feet; and joining that, a granary, 10 by 14 feet; on the opposite side of the floor, a corn-crib, 14 by 20 feet; a mow for hay, 14 by 32 feet, and hay or Hungarian grass on the scaffolds; and a floor 14 feet in width. The horses should stand on a ground floor, on the upper side of the barn. The earth that is taken out for a cistern should be used for that purpose, and be covered with an abundance of sand to within a foot of the sills of the barn. The floor of the granary need be only one foot and a half from the ground, and may be let down below the sills of the barn to that depth. There may be under-sills, resting on shoulders in the underpinning, to lay the floor of the granary on. The floor should be made of oak plank, two inches in thickness, and the granary lined up to the sills of the barn with similar plank, to keep rats from intruding. The corn-crib, on the opposite side of the barn floor, may be made in a similar manner. If the corn is not sufficiently dry to keep well in so deep a crib, dry rails should be laid along, occasionally, through the middle of it, for ventilators. But what would answer for cribbing corn in Illinois, might be ruinous in the State of New York.

A wagon and carriage-house may be made on the upper side of the barn; and there should be a building for a hog-house, some 30 feet by 16, with a corn-crib and hen-house over the two rooms for hogs—there being free access from their feeding-room into a small adjoining yard.

Perhaps as good a shelter for calves as any other, is a rick of straw suitably built in a yard for them—being brined, from time to time, around, near and at the bottom of it. Sheep can find a comfortable shelter under the floor of the barn.—B. C. W., *in Genesee Farmer.*

TOOLS AND IMPLEMENTS FOR A 100 ACRE FARM.

"What Tools and Implements are necessary to farm it profitably on one hundred acres, including timber lot, managed in the usual way of grain-growing and stock-raising combined?"

There would be wanted 1 two-horse scouring plow, 1 one-horse scouring plow, 1 one-horse three-shovel scouring plow, 1 harrow, 1 spade, 1 barn-shovel, 1 wheelbarrow, 1 dung-fork, 2 pitch-forks, 2 hoes, 1 wagon, 1 two-horse reaper and mower combined, 1 horse-rake, 1 corn-sheller, 1 of the little cast iron grist-mills, provided they are found to be durable and to do good business, 2 sets of harness, 1 saddle and 1 carriage.

The best and most profitable way of planting corn that I have noticed, is to drop with the hand and cover with the hoe. When thus planted, it comes up enough better to more than pay for the extra trouble.

No person can raise grain cheaper, by cutting and threshing it with machinery; but the same help can grow much more with it than without it. —B. C. W., *in Genesee Farmer.*

MANURE MAXIMS.

At a late meeting of the Farmers' Club of the American Institute, Mr. T. W. Field read a paper on manures, in which he said:

The whole subject of manures may be stated in this proposition:

1. Manure does not waste so long as it is unfermented or undissolved, and these conditions may be effected by drying or saturation.

2. Fresh manure is unfit for food for plants.

3. Fermenting manure, in contact with inert matter, has the power of neutralizing vicious properties, such as the tannic acid of peats, and making it a fertilizer.

4. Manure wastes in two ways—the escape of gas and the dissolving of its soluble salts.

5. The creative power of manure, mixed with other substances, is capable of multiplying its value many times.

6. The value of manure to crops is in proportion to its divisibility through the soil. The golden rule of farming should be small quantities of manure thoroughly divided and intermingled with the soil.—*Country Gentleman.*

WATER.

Potatoes contain 75 per cent. (by weight,) and turnips no less than 90 per cent. of water. A beafsteak, though pressed between blotting paper, yields nearly four-fifths of its weight of water. Of the human frame, bones included, only about one-fourth is solid matter (chiefly carbon and nitrogen,) the rest is water. If a man weighing one hundred and forty pounds was squeezed flat under a hydraulic press, one hundred and five pounds of water would run out, and only thirty-five pounds of dry residue remain. A man is, therefore, chemically speaking, forty-five lbs. of carbon and nitrogen diffused through six buckets of water. Berzelius, indeed, in recording the fact, justly remarks that the "living organism is to be regarded as a mass diffused in water;" and Dalton, by a series of experiments tried on his own person, found that of the food with which we daily repair this water-built fabric, five-sixths are also water.—*Scientific American.*

LETTER FROM MR. BROWN.

Lowell, Sept. 15, 1858.

Dear Sir:—I came here this morning to attend the annual Exhibition of the *North Middlesex Agricultural Society.* It is the elder daughter of the old Middlesex Society, whose meetings are holden at Concord. She has another bouncing child in the south part of the county, who calls her admirers around her annually at Framingham. They are both healthy, active, well-bred and useful children, and are a credit to the stock from which they sprang.

This society has ample and pleasant grounds enclosed with a substantial fence, near the city, where the stock is exhibited, and the horses are put upon their paces. The plowing match took place near by, and was contested by three double teams, four horse teams and five single teams,—twelve in all. The ground was a sandy loam, with a thin sward, and did not call for the exercise of any special skill to produce good work. A variety of plows were used, and among them an iron plow, manufactured at South Boston, which I had not seen before. It appeared to be symmetrical and handy, and did good work. There was also a new implement on the ground which I should call a *plow-harrow*, because the frame is shaped like a harrow, while the teeth are a combination of a double-mould board plow and the common iron tooth of the harrow. A tooth comes to an edge in front, and as it recedes, the sides flare out, making a sort of mould-board. I should have been glad to see it in use, and judge of it by its work, but it was not put in operation while I remained upon the ground. The show of cattle, horses, swine, poultry and sheep was not large, but contained some fine specimens in each department.

The exhibition of Fruits, Vegetables, and Household work, took place in Huntington Hall, in the city, and was very fine. There was an excellent display of peaches, plums, grapes, among them some fine samples of the Concord, apples, pears, &c. The show of vegetables was large, numerous in variety, and they were of the first order. There was little machinery, and no farm implements but a horse-rake. Mr. O. Nichols had his portable cider-mill, and I thought it a good time to have fifty bushels of apples present and the operation of cider-making going on.

A procession was formed at this place and marched to French's Hall, where a good dinner awaited the hungry throng, and where they were soon inducted into a new series of ceremonies. The hall was clean, cheerful and attractive, as was the dinner itself, and everybody seemed to be in good nature with himself and all the rest of the world. A brief welcome from the President of the Society, Hon. Tappan Wentworth, and an appropriate blessing invoked by the Rev. Mr. Sargent, of Lowell, were all the ceremonies that kept nervous hands from the numerous weapons that lay in repose by the sides of long lines of shining plates. The next twenty minutes was a period of apparently great gastronomical enjoyment, and there followed a gradual cessation of the sounds common on such occasions, and the President announced the Rev. Frederick Hinckley, of Lowell, as the orator of the day. He occupied forty or fifty minutes, and was listened to by a most attentive and gratified audience. His subject was—*The Farmer and the Man—or Agriculture in its Ministry to Manhood.*

The subdivisions of this branch of his subject were, upon the *Ends of Labor; Means of Living; Success in Avocation;* and *Development of Manhood.*

The next general division was upon the *Elements of Manhood, fostered or involved in the Farmer's Life,* and the topics discussed were,—*Physical Vigor; Mental Activity; Social Sympathy; Love and Appreciation of the Beautiful; Moral Integrity and Religious Faith.* All these points were skilfully touched, and enforced in a clear, earnest and persuasive manner, showing that the speaker had given *the wants in agricultural life* considerable thought and investigation. What he uttered fell from his lips as though every thought had just been nestling warmly around his own heart, and thus it fell upon sympathetic hearts where it will take root and bear fruit abundantly. It was an address abounding in valuable suggestions on the poetic, or home side of agricultural life. We have precepts without end on improvement in turning furrows and making manures; now we need them on the associations and sympathies of rural life; on the value of varied and extended knowledge to the farmer, as well as to those engaged in any other avocation.

As farmers, we are indebted to the clergy for the introduction of many valuable fruits and flowers, and examples in practical horticulture and agriculture, and for several of the best works on these subjects. They have education, disposition and opportunity, and when they have discovered or experimented, possess the ability to relate to the world the results of their labors.

After the address, Wm. G. Lewis, Esq., a delegate from the State Board of Agriculture, delegates from other societies, and several other gentlemen addressed the audience. The grave designs of the occasion were enlivened by anecdote and pleasant illustration, so that "the table was often in a roar," and no one present seemed to know that there was such a thing as "dull care" in the wide world.

Reports were then read, premiums awarded,

and such other matters considered and concluded as demanded attention, and the *Farmers' Festival* in North Middlesex closed for the year 1858.

To-morrow commences their Horse Show, on the fair grounds, to be continued two days. But what means that wind, moaning through the pines! It comes from the sea, is raw, and filled with chilly vapor! Who knows what terrible pressure is driving it in, and whether it may not fall in drenching torrents before the grand cavalcade shall assemble in the morning. It is near the period when the sun enters one of the equinoctial points, you know, and we always have a flurry in the elements about that time. We shall see. Yours, very truly, SIMON BROWN.

JOEL NOURSE, Esq., BOSTON.

For the New England Farmer.

CROPS IN PRINCE EDWARD CO., C. W.

Wheat is badly eaten by the weevils, so that but little of the first quality can be found. Rye is about an average crop. The last few years this grain has been much more extensively sown than wheat, which was formerly a staple crop, but recently it is not considered reliable. This is considered by some an evidence of poor farming, and not, perhaps, without good reason. At any rate, land that once bore good crops of wheat will not do it now under the same system of culture. Oats, barley and peas are good where the land was not too wet in the spring. Such land, however, was scarce here last spring, owing to frequent and very heavy rains. Corn grows well here, though less attention is paid to its cultivation than to other crops. The yield this year, on suitable land, will be good. I planted the "King Philip" variety, and in 88 days from planting I found some ripe enough to grow. The hot weather of the first ten days of this month was very favorable. Potatoes are rotting in some locations, and the tops nearly all died the first week in this month, late planted ones dying as early as others. This is considered by some a sure indication of disease, and they predict a general failure. It is to be hoped they are false prophets. Early potatoes are very fine, and as far as I can learn, are free from infection. Apples are almost a total failure. I think I never saw so few. Plums are plenty in some places, generally native varieties, such as the Blue and the Green Gage, and a larger blue plum.

I have referred to the failure of land to produce as well as it formerly did, and perhaps it may not be out of place to mention what I believe to be a prime cause of deterioration,—that is, a waste of manure. While riding by a good farm a few weeks ago, after a heavy shower, I noticed a large, black stream running from the barnyard and depositing its treasures in the sandy gutter of the highway, a distance of thirty or forty rods, when by digging a ditch across the road not more than four of five rods, it might have been conducted into a beautiful field. Such instances are too common.

9 *Mo.* 13*th*, 1858. L. VARNEY.

THE POTATO DISEASE.

Last week we gave some illustrations of the potato leaf and tuber, and of the insect preying upon them, together with an account of Mr. HENDERSON'S discovery. We now place before the reader the discovery of Mr. REED, to which we referred in that article. Mr. Reed has laid before us a mass of evidences going to substantiate what he states, but for which we cannot find space. His statement is as follows:

IMPORTANT MICROSCOPIC DISCOVERY SHOWING THE CAUSE—PATENT GRANTED FOR THE REMEDY.

MESSRS. EDITORS:—The miscroscopic examinations which I have made of the potato plant, during several summers past, has revealed facts of vast importance to agriculturists, both in America and Europe. In 1845 the United States Patent Office published various communications, letters, extracts, &c., upon the potato disease. The first scientific examination in the United States was made in the State of New York in 1844. The publication of this investigation induced many persons in this country to form opinions that fungi caused the disease. The same opinion also prevailed in Europe. Atmospheric influence was another theory. Insects upon the vines and leaves another.

My microscopic examination and experiments commenced at Waltham, Mass., in 1851. In June of that year, I found the under leaves on my potato stalks turning yellow—some quite dead—while the tops and leaves and also the leaves and stalks of other hills continued quite thrifty and green. This peculiar circumstance, thus early in the season, induced close observation and careful examination into the phenomenon. A query naturally arose—can fungus or atmosphere act thus partially upon the plant? Is there not some other predisposing cause prevailing? From this investigation I felt confident that insects or worms had attacked these plants at the *roots*.

Acting from this impression I examined the roots, but with the natural vision no insects were found. The microscope, however, revealed myriads of insects on the seed tubers, roots and stalks *under ground*. The attack upon the latter, at the lower joint, was visible in spots or marks resembling *iron-rust*.

Potatoes which I had in jars and flower-pots in my shed, covered from any exposure, (experiment tubers) exhibited, under the microscope, similar insects—and tubers taken from my cellar, at this time, had insects on those which were sprouted. Thus in *three separate and entirely dissimilar positions*, insects, similar in every respect, were found, evidently subsisting upon the sap of the sprouts and vines. This revealed to me unquestionable evidence, that, during the early growth of the plant, insects' ravages produced deterioration by the draining of the sap from the vital part—thus causing the disease. The insects, being only microscopic, rendered it extremely difficult to discover the nidus or hibernating spot of their eggs.

Early in my researches, however, I became satisfied, from the position of the *young* insects, that the eggs would be found near or under the eyebrows of the potatoes. This proved to be cor-

rect. It was not until 1856 that I *first* found the eggs. They are found imbedded in the very sprouts and in the skin near the eyes, but only with a powerful microscope and by the light of the unclouded sun can they be found. During the period from 1851 to 1856 my experiments in cultivation and otherwise were continued. Since the latter date I have watched as before, (sealed in glass jars and otherwise,) the development of the tubers, and the embryo progress of the eggs to the first animate motion of the tiny insects, and their attack upon the tender sprouts; the effects of their ravages, and the progress of their poison infused into the vines, causing the malady. This insect is the *Alphis.*

The particulars of my discoveries and my opinion on this subject were communicated to the Governor and Council of Massachusetts in August, 1851, answering a resolution of the Legislature, passed that year, soliciting information on this subject. And the fact is a matter of record in the State Department. For reasons of my own, my communication was to remain with the seal unbroken, unless at my request, until 1856.

I have thus placed before the reader the time, original circumstances of discovery, as also the final development showing the *cause* of the potato disease.

The facts and authenticated proofs attached thereto, and a multiplicity of other similar evidence, has been placed before the United States Patent Office, there to remain. They are deemed adequate to settle the question, positively, as to the *cause* of the disease. I need say only a word more. Let me briefly add, that, by repeated experiments, I have *discovered a practical remedy for the disease.* The tests of cultivation are shown by the evidence of my immediate neighbors, at Waltham, Mass., which proves the efficacy of my remedy.

After a thorough and most rigid investigation before the United States Patent Office, I have secured letters patent from the United States Government for the right to apply the remedy. I am prepared to dispose of rights to use the remedy. Individuals wishing to possess the same, for States or counties, will apply by letter, or otherwise, to the undersigned.

Baltimore, 1858. Lyman Reed.

GRAFTING THE ORANGE PLANT.

Sir:—In the May number of your excellent journal I notice an inquiry by your North Bridgewater correspondent, Austin C. Packard, on the mode of grafting an orange plant, to which I perceive no reply has been made. Permit me, therefore, to occupy a portion of your space, while, for his information, I detail the *modus operandi.*

Grafting is best performed in Spring, when the plant begins to push forth vigorously. The scion must be a strong shoot of the preceding year's growth, about three eyes in length. The essential conditions to ensure success—a perfect union of the *liber* or inner bark of the stock with the *liber* of the scion—a slight bottom heat if convenient, though not absolutely necessary; shade, and a confined atmosphere, to secure moisture until they are perfectly united, in order to prevent evaporation from the surface of the scion, and to retain its absorbing powers in action. Having thus premised, cut from the side of the stock at the height at which it is wanted to work it, and in a longitudinal direction, a sloping piece about an inch and a half long, and in width equal to the diameter of the scion at its lower extremity, against which, the latter, somewhat thinned down to about the same length, yet not so deep as to reach the *medulla* or pith, and retaining its two upper leaves, is to be applied, with the *liber* of both in contact the entire length of the cut on one side at least, and bound round firmly with coarse woolen thread, or, what will answer as well, a piece of lamp-wick, until the joint is entirely covered. Pinch off the points of the branches on the stock if any, and all young shoots as they arise, in order that all the sap possible may be impelled into the scion. After it has made shoots an inch or two in length the tieing must be loosened and the head of the stock cut off at the joint. The proper time may always be known when the cellular deposit is observed on the edge of the scion, uniting both scion and stock.

Boston, Aug. 9, 1858. Thomas F. Walsh.

For the New England Farmer.

LIGHTNING, AND BARNS WITH NEW HAY.

Mr. Editor:—In a late *Farmer*, "P." asks whether barns filled with new hay are more liable to be fired by lightning than at any other time, or than any other building? If so, the reason. That barns are struck at that season more frequently than at any other time is true. Statistics gathered from the most careful observations show that about seven-tenths of the buildings burnt by lightning are barns. And most of these disasters occur during the curative state of the hay, which time continues some three months from the begining of haying.

Why are barns more liable to be thus burnt by lightning? New hay contains much gas, especially carbon. All of the hay is highly charged with electricity, so that the whole mass becomes a most powerful electric battery. All being very combustible is sure to fire if the lightning strikes it. The all important inquiry is, can conductors be placed on buildings so as to protect them? Electricity, though the most powerful and extensive element in nature, is, like every other element, regulated by law. If we understand the laws by which it is governed, the lightning can be managed and controlled as well as any other element. This is a mighty, subtle, active agent; going, when it moves, at the speed of more than two hundred thousand miles in a second, travelling more than eighty miles faster than the rays of light coming from the sun. Subtle as this fluid is, and important as the laws which govern it are, men are found engaged in erecting lightning rods to protect our buildings, who do not understand the first principles of this important science. Not but that they, like the false prophets of old, make high and loud pretensions, yet many now, as then, are deceived by them. If we would not be humbugged in so important a thing as the protection of life and property, let us employ men who are thoroughly acquainted with the business.

Yours truly, A. H. Reed.

Mendon, August, 1858.

EXTRACTS AND REPLIES.

WILLOWS FOR FENCE.

Allow me to make a few inquiries concerning willows for fence. I have a large meadow that needs fencing—will branches taken from the common willow tree and set in the mud, make a durable and good fence around it? If so, what season of the year, how large and how deep should they be set, and how far apart? Will they grow in the form of the weeping willow by reversing the ends? J. S. ELLIS.

Boston, Sept., 1858.

REMARKS.—Willows will grow readily, cut in April or early in May, and set from one to two feet in the ground, where it is usually moist through the summer. If they are intended for fence without other aid, they must be planted quite close, within two feet of each other, and then headed down annually so as to dwarf them. They may be set much further apart, and when stiff enough have rails or strips of board nailed across them, which will be sufficient to keep out cattle, but not sheep or swine. A willow stick, whether half an inch, or an inch and a half in diameter, will grow if set under favorable circumstances.

A willow fence answers the purpose very well where the land is liable to be inundated, or where the posts are badly thrown by frost.

A NEW STUMP PULLER.

Your Pittsford correspondent, who wants his pine stumps put into a fence, may address JULIUS M. NORTH, of Shoreham—who has a machine that extracts stumps on the same principle of the large two-wheel stump machine which he describes. The machine is moved on four wheels, a common ox-cart in front, (minus the box or body,) and two trunk wheels in the rear, with a pulley attached to the power to be used when necessary. The stump frame was borrowed from a lever stump machine purchased here about twenty years ago, which was a failure, as every stump machine will be that extracts the stumps by manual strength only, at the present or past prices of labor. HIRAM RICH.

Shoreham, Vt., Sept., 1858.

CURE FOR THE POISON OF IVY.

In answer to a request for a cure for the poison of ivy, I send you a receipt, which its use for ten years warrants me in considering a specific. It is as follows: take a handful of the *lobelia inflata*, make an infusion by pouring on it in a tin or earthen vessel, a pint of *warm* water, not hot; set it about an hour in a warm place, reserve a little to sip occasionally, and wash with the remainder frequently and thoroughly the parts affected, and a speedy and certain cure will be the result.

This plant is easily known by its small, light blue flowers and bladder-like capsules, and as if to be an antidote ever at hand, grows wherever ivy is found, on high or low, wet or dry ground. The green plant is best. It may cure dog-wood; it will be safe to try it. M. A. D.

Rockport, 1858.

CURE FOR A WIND SPAVIN.

I saw a communication in your valuable paper signed "H. S. G.," of West Bethel, Vt., in relation to his colt, wishing to know whether it was spavined, and what remedy to apply.

I should call it a "wind spavin." It may be cured with the following remedy: take equal parts beef's gall, neatsfoot oil, brandy and spirits of turpentine; shake well together, and apply it thoroughly once a day until cured. I have cured them in this way in eight weeks.

Hill, N. H., 1858. N. F. MORRILL.

THE WAY TO HAVE FRESH TOMATOES WITHOUT SELF-SEALING CANS.

Some afternoon when you think everything will be killed with frost at night, pull up your vines that are loaded with green tomatoes, and hang them in the cellar; they will ripen off finely. I took some from my cellar last Christmas day, that were very nice. J. C. NORTON.

Bridgewater, Sept. 14.

BOYS' DEPARTMENT.

THE HAUNTED HOUSE.

Speaking of ghosts, I have heard that some years ago there was a lone house standing by itself, near a plantation, not far from Guilford. The house nobody would ever take because it was haunted, and strange noises heard in it every night after dark; several tenants tried it but were frightened away by the noise. At last one individual, more courageous than the rest, resolved to unravel the mystery. He accordingly armed himself, and having put out the light, remained sentry in one of the rooms. Shortly he heard on the stairs, pit pat, a full stop again. The noise was repeated several times, as though some creature, ghost or no ghost, was coming up stairs. At last the thing, whatever it was, came close to the door of the room where the sentry was listening; his heart, too, chimed in with pit pat rather more than it was wont to do. He flung open the door, hurry-skurry, bang; something went down, down stairs with a tremendous jump, and all over the bottom of the house the greatest confusion, as of thousands of demons rushing in all directions, was heard. This was enough for one night. The next night our crafty sentry established himself on the first landing, with a heap of straw and a box of lucifer matches. Soon all was quiet. Up stairs again came the pit pat, pit pat. When the noise was close to his ambush he scraped his match, and set fire to the straw, which blazed up like a bonfire in an instant; and what did he see?—only a rabbit, who stood on his hind legs, as much astonished as was the sentry. Both man and beast having mutually inspected each other, the biped hurled a sword at the quadruped, who disappeared down stairs quicker than he came up. The noise made was only the rabbit's fore and hind legs hitting the boards as he hopped from one stair to the other. The rabbits had got into the house from the neighboring plantation, and had fairly frightened away, by their nocturnal wanderings, the rightful owners thereof. The more courageous sentry was rewarded for his vigil, for he held his tongue

as to the cause of the ghost. He got the house at a reduced rent, and several capital rabbit pies made of the ghosts' bodies into the bargain.—*Buckland's Curiosities of Natural History.*

SHUN AFFECTATION.

There is nothing more beautiful in the young than simplicity of character. It is honest, frank, and attractive. How different is affectation! The simpleminded are always natural. They are at the same time original. The affected are never natural. And as for originality, if they ever had it, they have crushed it out, and buried it from sight, utterly. Be yourself, then, young friend! To attempt to be anybody else is worse than folly. It is an impossibility to attain it. It is contemptible to try! But suppose you *could* succeed in imitating the greatest man that ever figured in history, would that make you any the greater? By no means. You would always suffer in comparison with the imitated one, and be thought of only as the shadow of a substance—the echo of a real sound—the counterfeit of a pure coin! Dr. Johnston aptly compared the heartless imitator—for such is he who affects the character of another—to the Empress of Russia, when she did the freakish thing of erecting a palace of ice. It was splendid and conspicuous while it lasted. But the sun soon melted it, and caused its attractions to dissolve into common water, while the humblest stone cottages of her subjects stood firm and unmarred! Let the fabric of your character, though never so humble, be at least real. Avoid affecting the character of another, however great. Build up your own. Be what God intended you to be—*yourself*, and not somebody else. Shun affectation.

LADIES' DEPARTMENT.

TALKING IN ECSTATICS.

And now that I am upon this subject of talk, it will be well to say all I have to say upon it. It is a very common thing for young women to indulge in hyperbole. A pretty dress is very apt to be "perfectly splendid;" a disagreeable person is too often "perfectly hateful;" a party in which the company enjoyed themselves, somehow becomes transmuted into the "most delightful thing ever seen." A young man of respectable parts and manly bearing is very often "such a magnificent fellow!" The adjective "perfect," that stands so much alone as never to have the privilege of help from comparatives and superlatives, is sadly over-worked, in company with several others of the intense and extravagant order. The result is that, by the use of such language as this, your opinion soon becomes valueless.

A woman who deals only in superlatives demonstrates at once the fact that her judgment is subordinate to her feelings, and that her opinions are entirely unreliable. All language thus loses its power and significance. The same words are brought into use to describe a ribbon in a milliner's window, as are employed in the endeavor to do justice to Thalberg's execution of Beethoven's most heavenly symphony. The use of hyperbole is so common among women that a woman's criticism is generally without value. Let me insist upon this thing. Be more economical in the use of your mother tongue. Apply your terms of praise with precision; use epithets with some degree of judgment and fitness. Do not waste your best and highest words upon inferior objects, and find that when you have met with something which really is superlatively great and good, the terms by which you would distinguish it have all been thrown away upon inferior things—that you are bankrupt in expression. If a thing is simply good, say so; if pretty, say so; if very pretty, say so; if fine, say so; if very fine, say so; if grand, say so; if sublime, say so; if magnificent, say so; if splendid, say so. These words all have a different meanings, and you may say them all of as many different objects, and not use the word "perfect" once. That is a very large word. You will probably be obliged to save it for application to the Deity, or to His works, or to that serene rest which remains for those who love Him.—*Titcomb's Letters to Young People.*

DOMESTIC RECEIPTS.

Important Hint in Washing Clothes.—The *American Agriculturist* asserts that the great secret of the success of nine out of ten of the washing fluids, mixtures, and machines which have been sold over the country for many years past, is not owing so much to the inherent qualities of the articles themselves as to the process of soaking, which they invariably recommend. If people pursuing the old-fashioned system of washing will simply take the precaution to throw all the clothing to be washed into water ten or fifteen hours before beginning operations, they will find half the labor of rubbing and pounding saved in most cases. Water is of itself, a great solvent, even of the oily materials that collect upon clothing worn in contact with the body, but time is required to effect the solution. Every one is aware of the effect of keeping the hands or feet moist for a few hours—the entire external coating of secretion is dissolved. The same effect is produced by soaking for a few hours clothes soiled by the excretory matter of the skin.

Home-Made Figs.—Will you encourage home manufacturers so far as to publish these recipes?

Pare and core pears, peaches, or quinces, (or tomatoes:) make a syrup, flavored with lemon peel. Boil the fruit till done, then drain it through a colander, and spread on dishes; place in the sunshine, or in a moderately heated stove, till nearly dry; sprinkle with loaf sugar; dry a little more; then pack them in boxes, and put in a cool place. Figs made in this way are considered superior to real imported figs. When tomatoes are used, they should be the straw-colored fig tomatoes.—*Lilly, in Zion's Herald.*

Erysipelas.—A correspondent of the Providence *Journal* says, that in ninety-nine cases out of every hundred, cranberries applied as a poultice will effectually cure the erysipelas. There is not an instance known where it has failed to effect a cure, when faithfully applied before the sufferer was in a dying state. Two or three applications generally do the work.

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JOEL NOURSE, PROPRIETOR.
OFFICE...13 COMMERCIAL ST.

SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

CALENDAR FOR NOVEMBER.

"'Tis the year's eventide.
The wind, like one that sighs in pain,
O'er joys that ne'er will bloom again,
Moans on the far hill side.
The air breathes chill and free;
A spirit, in soft music, calls
From autumn's gray and moss-grown halls,
And round her withered trees,
Leaves, that the night wind bears
To earth's cold bosom with a sigh,
Are types of our mortality,
And of our fading years."

NOVEMBER mornings are often cold and dark, and a dull, sombre feeling pervades the whole day. But if the pleasant, cheerful weather does not lead us to go briskly about our duties, we must set about them under the spur of necessity, for they must be performed. The corn must be husked and the grain threshed. The roots must be taken out of the ground, if they have not been already, and carefully secured in the cellar, and it is to be hoped you have a big pile of them.

Now the fields have become "brown and sere," and the cattle can find nothing green and succulent,—you will begin to appreciate the value of turnips, carrots and beets. Before the ground freezes there are many things to be done. If you need any drains about the house and yard, to carry off the rain-water that is apt to trouble you by its accumulation upon the frozen surface, see that they are made in the right place, before the ground freezes. A little forethought in this respect may save you much inconvenience before the ground thaws in the spring.

Now is the time to get a large heap of muck into the barn-cellar, or if you have not got the muck, dry loam. It will soon be frozen, and then it will be more work to handle it, and it will not be mixed so freely or so well with the manure.

See that everything that needs protecting from the weather is properly attended to at once. Cover the asparagus bed and rhubarb with a good coating of horse-manure. A dressing of fine old muck and ashes, spread on the strawberry bed, and this covered with leaves, or meadow hay, straw or fine boughs, will prepare it for an early start in the spring. Isabella grapes are the better for being laid upon the ground, and covered, either with earth or hay or boards. We prefer a covering of soil alone—and the method is as follows:—Dig a shallow trench three or four inches deep with the hoe, as long as it may be needed, then lay the vine into it, gathering in all the side shoots. Then lay across two or three old boards or stakes, step on them and press down the vine and throw on the soil which had been removed from the trench, and enough more to cover the vine effectually. In the spring, after the soil gets warm, remove the earth carefully from the vine, and lift it from the trench, and replace it on the trellis. One great advantage of this mode of treating the grape is, that the vine remains in a uniform temperature, and does not freeze and thaw with the change of the weather. We have never known vines winter-kill that were treated in this way. Have the cellars well secured, and see that the hens have a warm, dry place, with a plenty of gravel and ashes for them to wallow in. See that the swine are provided with a warm, dry sleeping place, secure from the driving wind and snow. They are fond of warmth, and will not thrive without it. A little care for poultry and pigs will be well repaid, and the creatures will be much more contented and comfortable.

We think it is not well to allow the cattle to roam over the fields after this time, browsing the trees, and shivering with the cold, even if there is no snow on the ground. They may, it is true, pick up a part of their living, but they waste their manure, and get roaming habits They had better be kept in the barn and yard, and fed from the ample store which has been provided for them. Take good care of them in the early part of the season, and get them accustomed to quiet habits, and they will not fret off the flesh which they have accumulated in the pasture. Give them plenty of salt, a mess of root daily, and a foddering of corn stalks or husks. A variety of food is agreeable to them, and promotes their appetite.

Cattle that are being stall-fed require particular attention. Do not surfeit them with too large quantities of food. Give them no more at one time than they will eat up clean. Pumpkins and apples, with shorts and meal, make a good variety of food. Use up the perishable articles first. If your hay is not of the best quality, be sure and cut it and moisten it, and mix the meal and shorts with it. Give them plenty of good bedding and keep them clean.

We generally have a week of fine weather in NOVEMBER—the true Indian summer. There is

> "Yet one smile more, departing distant seen—
> One mellow smile, through the soft vapory air."

Improve well these sunny days.

> "Ere o'er the frozen earth the loud winds run,
> Or snows are sifted o'er the meadows bare."

But NOVEMBER is not all a month of sadness and melancholy. We have been blessed in our "basket and store" more than we even expected a few weeks ago, and we have reasons all around us, for gratitude to the Giver of all good gifts. Our forefathers set apart a season in NOVEMBER to offer a sacrifice of thanksgiving and praise, and we will joyfully imitate their pious example. May we do it with sincere feelings of thanksgiving for the mercies of the year; and let us manifest the sincerity of our gratitude for the blessings by which the Year has been crowned, by imparting freely to those who need, remembering that "it is more blessed to give than to receive."

INDESTRUCTIBILITY OF MATTER.

We can alter the combinations and forms of matter, but we can in no way destroy it; and, though we may avail ourselves of its properties, in order to obtain an enormous force to do our bidding, and so make ourselves independent of wind and tide, and even anticipate the flight of time, we can create no new property. "One of the most obvious cases," says Sir J. Herschell, "of apparent destruction is, when anything is ground to dust and scattered to the winds. But it is one thing to grind a fabric to powder, and another to annihilate its materials; scattered as they may be, they must fall somewhere, and continue, if only as ingredients of the soil, to perform their humble but still useful part in the economy of nature. The destruction produced by fire is yet more striking. In many cases, as in the burning of a piece of charcoal or a taper, there is no smoke—nothing visibly dissipated and carried away; the burning body wastes and disappears, while nothing seems to be produced but warmth and light, which we are not in the habit of considering as substances; and when all has disappeared, except, perhaps, some trifling ashes, we naturally enough suppose that it is gone, lost, destroyed. But when the question is examined more exactly, we detect, in the invisible stream of heated air which ascends from the glowing coal or heated wax, the whole ponderable matter, only united in a new combination with the air, and dissolved in it. Yet, so far from being thereby destroyed, it is only become what it was before it existed in the form of charcoal or wax—an active agent in the business of the world, and a main support of animal or vegetable life.—*Dickens.*

For the New England Farmer.

STOCKS FOR GRAFTING.

For twenty years past I have experimented in grafting on stocks, of different species of fruit from that of the scion. If the species are not nearly allied, it is useless to expect they will unite and grow; we hear frequent reports of grafting the apple into maple, poplar, and other trees of various kinds of an opposite nature, which is much like raising wheat and chess by sowing wheat alone. There are many instances where a scion and stock of two different kinds of fruit will unite and continue growing for one or more seasons, and then die before producing fruit; others will bear fruit for several years; the pear, on quince, for instance, yet in this case the tree is much shorter lived than when growing on its own roots; but many varieties of pears are much improved in quality by the process. I have put the apple on the wild pear, or shad bush; the scions grew vigorously for one season, and then died. Others set in the thorn did not grow at all. The pear was inserted in the mountain ash and lived till it produced fruit, and then failed; grafted in the apple the result was the same; in the quince, it succeeds better.

A few years since a quince stock of the common kind was grafted with the pear for a person who had quite a number of dwarf trees on Angiers quince; he recently informed me the one above mentioned was the best tree in the collection. A plum graft put in a peach some years since, now produces fruit; whether it will survive long I am unable to say. Last spring a few plum scions were tried in the small wild red cherry; a part of them have made a good growth, and may produce fruit in time. The apricot succeeds very well on the peach, and also on the plum; the almond I have set in the plum, which grew for several years. I have never been able to succeed in making a peach scion live, either in peach or plum stock, yet the peach in budding, grows as

readily as other kinds of fruit. Cobbett recommends budding the peach into the plum. and to this he attributes the long life of peach trees in England. He states that it is not uncommon there to see trees fifty years old in full vigor. I have set scions of the English cherry in the Mazzard, the Morello, wild black, the choke cherry, and small red or pigeon cherry of the woods; in the wild black they did not live, neither in the choke variety; in the Morello they grew and bore fruit a few years, and then died; in the small red or pigeon, they have done very well, and many which have been grafted now produce fruit, and to appearance may live many years. But in general it is preferable to have the stock and scion of the same species, with regard to all kinds of fruit, when it is practicable.

Leominster, Sept., 1858. O. V. HILL.

For the New England Farmer.

ON HARVESTING WHEAT.

MR. EDITOR:—While in the employment of one of your subscribers, and he harvesting a very nice piece of wheat which he had raised, the question rose with us which was the best, cheapest and quickest way of doing it. We disagreed in our opinions, and as "H." thought his way was not only the quickest and cleanest, provided a farmer had plenty of barn room, we agreed to make our statements full and plain, and reasons given, and then leave it for your practical and experienced farmers to decide.

Mr. Holmes claimed that the quickest and best way was to mow his wheat, rake it into winrows and tumbles, and draw it as he does hay. He claims that the expense is so much less than to hire a man to reap, cradle and bind it, and that it would not pay, or at least, there would be a saving in so doing, beside doing it so much quicker. I contended it was a slovenish and wasteful way of harvesting grain, and more especially a crop of wheat. I contend there is more or less wheat that will not be cut; there will be many scattering heads on the ground which will not be got. Again, in drawing and pitching, there is a loss by the scattering from the wagon from the field to the barn. It takes four times as much room to mow it away, saying nothing about the scatterings that will be lost before threshing, and the loss by exposure to the fowls I think after a man has been to the expense of preparing a piece of ground, and raised a nice crop of wheat, his best way is, either to reap, or cradle, and then bind it in medium size bundles, and stack it a few days till well cured, and then draw it to the barn and put it on a scaffold by itself. The farmer that indulges in *mowing wheat*, is lacking in good taste, and is not what I should call a nice and prudent farmer. I hope some of your farmer subscribers will give us their opinions upon this subject, that Mr. H. and myself may have our errors pointed out, that we may in the future improve and profit by the practice of old and experienced farmers.

Another thing we differ in, is, in hoeing corn. I claim the only true way of hoeing corn is, to cut up and clean out all the weeds and grass from in and around the hill of corn, and then sift in among it a little fresh earth, and bring the weeds and grass upon the surface where the sun can wilt and kill them. My neighbor claims that the best way is to cover the grass and weeds with earth from one to two inches in depth. But will the earth kill the grass and weeds, or will they not, the first warm shower, make their appearance again, and be more rank and deeply rooted than before, and sap from the earth that virtue which the corn would otherwise have, by cutting up and killing them on the surface of the ground?

Georgia, Vt., 1858. N. N. H.

REMARKS.—We have never harvested a crop of wheat by mowing it, and have never known it done in half a dozen instances. Reaping it by hand is a slow and laborious process, and consequently expensive. Where the straw is not of much value, we would mow a crop of wheat, and suffer the incidental loss, rather than reap it by hand. But the true way is to cradle it, as an expert workman will cradle from two to three acres in a day, laying it out finely for the binders, and scarcely leave more scatterings than is usually left by the reaper.

With regard to hoeing, there can be no question, we think, but that it is better to hoe in clear, hot weather, and leave the grass and weeds that are pulled or cut up, on the surface, where the sun soon wilts them so that they will not take root. Most weeds are so tenacious of life that if only a small portion of their roots is covered with the soil, they will recover and grow again. The roots of some grasses, when cut up and covered again, will throw out a new root at every joint. But the matter may be so easily decided by experiment, that much doubt upon it does not seem necessary.

For the New England Farmer.

BUILDING ON THE HILLS.

The inquiry is prevalent among our young men, "why our fathers build upon the hills instead of building upon the flats, or low lands." The wisdom and good sense of our early settlers will readily be seen by every thinking mind who reflects upon the subject with care and attention.

The average temperature of the weather is much lower in the low lands, taken through the year, and not warmer, as many suppose. It is not only colder, but the atmosphere is peculiarly impregnated with bilious influences, and particularly adapted to the generation of diseases. So far as my investigations extend, the record shows more than four-fifths of all the cases of dysentery to have occurred in the low lands. Indeed, I do not know of a single case to have occurred upon the hills this many years. Young farmers, as you delight in beautiful scenery, sound health and a vigorous body, keep back upon the hills.

L. L. PIERCE.

☞ Brave actions are the substance of life, and good sayings the ornament of it.

For the New England Farmer.

CORN VERSUS BEEF.

It is said by a writer in the *Farmer* for March last, that it takes about ten pounds of corn to make one pound of beef. It is also stated by authority equally reliable, that one pound of corn contains more than twice as much nutritious matter as a pound of average butchers' meat. Thus butchers' meat furnishes in all, only 36.6 parts in one hundred of solid matter, to 63.4 of water; while corn meal contains 90 parts in 100 solid matter and only 10 of water.

Now in following out and applying these facts, we arrive at conclusions that may be, to some, not a little startling. We find, for example, that the change of corn into beef and pork, especially the latter, is a most palpable violation of the laws of domestic and political economy. For if it should be taken for granted that we raise 800,000,000 bushels of corn in the United States in a year, (and this is estimated to be the fact by Mr. John Jay, of the Geographical and Statistical Society of New York,) is it not safe to suppose that at least one-half of it is employed in fattening animals? And if it takes as much corn to make a pound of pork as it does to make a pound of beef, then here is a waste of 360,000,000 bushels of this valuable product; or at fifty cents a bushel, of $180,000,000; even though we admit that a pound of beef contained as much nutritious matter as a pound of corn, which we have seen above is not true.

If it is said, as it may be, that this is a national loss rather than a loss to individuals, I should like to know how it can be made out. I see no reason why a national loss is not a loss to each individual making up that nation—and in general, a loss which falls upon us about equally. If this is so, and we take our present population to be 30,000,000, here is a loss of six dollars to each individual, or thirty dollars for a family of five persons. If, however, we admit the corn to be worth twice as much per pound as the beef—I mean for all the purposes of human nutrition—then the loss of course is double that sum, or sixty dollars to a family. Are we able and willing to bear this loss?

Some may say they prefer the beef and pork because it makes them warmer than corn bread. But if this were admitted, the difference in favor of the animal food could not be as great as ten to one. It is not to be admitted, however. Corn meal contains 77 parts in 100 of the heat-forming principle, and butchers' meat only a fraction over 14 parts in 100.

It may be said that the beef and pork taste better than the johnny cake or the pudding. Not to the inhabitants of those countries that are sustained almost wholly on corn. Nor do they, indeed, to any one whose taste is pure and unperverted. It is a species of cannibalism in human society that makes a person relish flesh and blood, with all the filth that belongs to every part and parcel of them—some items of which it would not do for decency's sake to specify.

"At any rate," the laborer will say, "I can work better with my beef-steak for breakfast and corned beef for dinner." Can you work alongside of the corn-bread eater? The Swiss mountaineer who gets a little animal food nearly every day, and a plenty of milk, is soon outworked by his neighbor of the valley of the Ticin, who throughout the year lives almost wholly on food prepared from Indian corn. And there was a time when it was thought to be good economy in one part of our United States, to keep the laborer very largely on corn.

"But I like the beef-steak, I must have it," you may say; yes, here is the secret. Very well; if you are willing as the representative of the family to have your pocket picked every year of sixty dollars, then indulge your filthy habit a little longer. And certainly, it is yet a free country; although, I know not how long it will be.

W. A. ALCOTT.

For the New England Farmer.

THE RIGHT WAY TO MAKE AN ORCHARD IN A WORN-OUT FIELD.

GENTS.:—I wish to make some inquiries respecting the best manner of preparing an old field for the planting of an orchard, by answering which you will confer an esteemed favor on me, and without doubt, upon many other readers of your valuable journal. I have a field of about seven acres which it is desirable to lay out, and plant with an orchard. It is nearly square, lays pretty high, and produces annually two or three tons of white top. On the west side of the field there is a road, on the opposite side of which there is a piece of woods, while on the north it is protected from winds by a narrow belt of forest trees, running by the wall. With the exception of two or three slight depressions, or *runs*, as they are called, the field is nearly level. On the land are numerous heaps of cobble-stones with an old cellar filled with the same, and a large quantity of larger rocks, suitable for wall. There are at present, several apple trees in the field, mostly of an old growth, bearing natural fruit, to little or no profit. On three sides of the field there is stone wall, with a brush hedge growing beside it, on the fourth side there is a board fence. The soil is naturally good, the original growth having been oak, walnut, &c.

Having given you a particular description of the field, I would respectfully submit the plan of operation which I intend to pursue, wishing your criticism, and answers to the questions which I may propose.

In the first place, with the exception of the belt of timber on the north side of the field, I would clear the hedges by the walls, as also the old apple trees, and burn the brush upon the land. In place of the board fence I would plow a trench three feet wide and a foot deep and build a substantial wall with rocks taken from the field. And here has been a question in my mind whether it is best to fill the trench with cobbles or start the wall from the bottom of the trench. *(a.)*

I would then dig drains through the runs, three feet deep and as many wide, fill up two feet with cobbles, cover slightly with hay, and fill the drain with dirt. Having drawn the rocks from the cellar to a depth of two feet below the surface, I would fill in with dirt, leaving a smooth surface over which to plow. After clearing the trees and bushes, and removing all the rocks, I would plow this fall to a depth of ten inches, and leave for the season. In the spring I should intend to

cross plow, harrow, set out the trees, plant, and dress the land with manure. Now would it be desirable to set out the trees in the coming spring, or wait until the land is in a better state of cultivation? *(b.)*

What variety of apple should I select? *(c.)*

How deep, and how far apart should I set the trees? *(d.)*

How should they be manured, if at all? What dealer in trees will furnish me the best trees, taken up and packed, in the best manner, and at the most liberal price? *(e.)*

And lastly, will the enterprise pay any way? *(f.)*

You will excuse me for presuming to this extent upon your time and patience, but you will allow me to repeat, that by giving your opinions on this matter you will highly oblige me.

Derry, N. H., Aug. 5, 1858. N. H. B.

REMARKS.—*(a.)* Dig the trench three or four feet wide, and *three* feet deep, or even lower, if the digging is easy, fill with cobble stones, and use the earth thrown out to fill the stone holes that you get out to make the wall.

(b.) Set the trees as soon as you can, as by the time the roots have extended themselves your land will be in condition to feed them.

(c.) We cannot answer about varieties—the Baldwin seems to be the standard apple yet. Sweet apples will be profitable for the family and for stock, but, strange to say, they do not sell readily in the market to any amount. You should have half a dozen trees, at least, of the russet sweet; it is well known by the smooth warts which always mark this variety.

(d.) Set the trees as deep as they stood in the nursery, and if you can afford to cover so much ground and manure and cultivate it, set the trees 40 feet apart each way. Manure as you would for a good crop of corn, and plant the orchard with corn for several years.

(e.) You must look at the advertisements for information on this point. Have you called upon Mr. Wilson, of Windham, or Mr. Tenney, at Chester, or Cutter or Clement, of Dracut? Col. M. P. Wilder, of Boston, furnishes good trees, and our neighbor BUCKMINSTER, of the *Ploughman*, raises and sells at a fair price as good trees as ever were set in any man's orchard.

(f.) Pay, certainly, if you manage it properly.

AMERICAN POMOLOGICAL SOCIETY.—The 7th meeting of the *American Pomological Society* took place in New York city on Tuesday, Sept. 14th. President WILDER took the Chair and made the opening Address. Discussions of much interest succeeded, in which many valuable facts were elicited, some of which we hope to transfer to our columns. Col. Wilder, though having resigned the office of President, was re-elected by resolution.

For the New England Farmer.

FANNING AND GRAIN ASSORTING MACHINE.

MR. BROWN:—Have you ever seen Nutting's Patent Grain Fanning and Assorting Machine? Well, is it not a wonder even in this age of wonders? I have just now been witnessing a trial of that same "little giant" of a machine, and am compelled to exclaim, "how wonderful are its works."

It seems incredible, that such a cheap and simple machine, can perform so intricate a task, as to receive a horrid confusion of all sorts of seeds, grain, chaff and dirt, and with the celerity and certainty of intelligence itself, purify and divide the whole mass, emitting each kind in a separate parcel, with such accuracy that it never fails to astonish the beholders!

Do I exaggerate, when I estimate the intrinsic value of such an invention, as being unsurpassed by any agricultural implement among the many with which the world is now being honored and blessed?

If he is a public benefactor, who causes two blades of grass to grow where only one grew before, what shall we say of him who offers the means, within the reach of everybody, by which vegetation may be purified from worthless and noxious growth, with which it abounds, and made fit for the public use?

Perhaps a briefly detailed statement of what the machine is, and what it does, may not be uninteresting to your readers, and so I will try to give it "as I saw it." It is a plain, simple, cheaply made, and apparently very durable and conveniently proportioned machine, not unlike in its appearance to some other fanning mills; but with its outward appearances ends its similitude to any other with which I am acquainted. Its interior and working arrangements being constructed on philosophical and experimentally tested principles, adapted to secure the end sought, namely, the complete cleaning and assorting of the various useful grains and seeds from all impurities; and this is done, as before stated, with almost perfect precision, and very rapidly. With it, wheat is prepared for flouring without being submitted to the smut mills, thus saving more or less, always considerable, of seeds and small grain, valuable for provender or to feed to fowls, which is screened off in the smutting process and lost to the owner of the grist. It will likewise prepare wheat (and all other grain and seeds) so that it shall be fit to be sown; not only rejecting all oats and foul seeds, but selecting from the whole the largest and most perfect kernels, which alone ought to be used for seed. No intelligent corn-grower does less than to select for seed his best ears, and often from those ears rejects the smaller kernels. Now who doubts the wisdom of such precaution? But is more care necessary in the selection of seed corn than in seed wheat? It is a law of nature that "like produces like"—so if farmers would raise clean and perfect grain, they must sow clean and perfect seed. With this machine, grass seeds are cleaned ready for market and use, without the resort of hand sifting, as is usually practised. So, too, peas and beans, whether designed for cooking or for seedsmen's sales, may be perfectly

cleaned and assorted according to size. I wish all interested in such matters could stand by and see how quietly, easily and effectively all these things are accomplished.

The patentee, Mr. Nutting, has, I understand, labored for years in perfecting and bringing out this mill, which he now designs to offer to the country, and all thinking men will, I am sure, bespeak for him a remuneration commensurate with the vast benefit which his invention shall confer. E. INGHAM.

Springfield, Vt., Sept. 4.

REMARKS.—We have seen this fanning mill in operation several times, and believe it to be the best fanning and separating mill ever invented.

HEREDITARY TRANSMISSION.

Why should one doubt that cranial peculiarities, accidentally or artificially produced, may be transmitted, inasmuch as we see numerous examples of the transmission of other physical and artificially produced peculiarities, in man and the lower animals? All parts of the animal body are alike subject to the laws of growth and impression during utero-gestation. If accidental or artificial peculiarities of limbs, the skin, etc, are occasionally transmitted, why may not those of the head? Blumenbach relates the case of a man whose little finger was crushed and twisted by an accident to his right hand, and his sons inherited right hands with little fingers distorted. A writer in the *Western Review*, affirms that horses marked during successive generations, with a red-hot iron in the same place, transmit the visible traces of such marks to their colts. A dog had her hinder parts paralyzed for several days by a blow; six of her seven pups were deformed or excessively weak in their hinder parts, and were drowned as useless. Burdach cites the case of a woman who nearly died from hemorrhage after blood-letting; her daughter was so sensitive that a violent hemorrhage would follow even a trifling scratch. She, in turn, transmitted this peculiarity to her son. A man had the habit of sleeping on his back with his right leg crossed over the left; one of his daughters also showed the same peculiarity from her birth, constantly assuming it in her cradle, in spite of the swathing. A superb stallion, son of Le Glorieux, who came from the Pompadour stables, became blind from disease; all his colts became blind before they were three years old. Manpertius mentions a phenomenon which has been observed elsewhere by others; he assures us "that there were two families in Germany, who have been distinguished for several generations by six fingers on each hand, and the same number of toes on each foot." George Combe relates the following: "A man's first child was of sound mind; afterwards he had a fall from his horse, by which his head was much injured. His next two children proved to be idiots. After this he was trepanned, and had other children, and they turned out to be of sound mind." Venette knew a woman who limped with her right leg; her daughter was born with the same defect in her right leg. In the civilized countries the constant habit of milking cows has enlarged the udder greatly beyond its natural size, and so changed the secretions that the supply does not cease when the calf is removed. In Columbia, where circumstances are entirely different, nature shows a strong tendency to assume its original type; a cow gives milk there only while the calf is with her. M. Danney made experiments during ten years with rabbits, a hundred couples being selected by him with a view to the creation of peculiarities. By always choosing the parents, "d'apres des circonstances individuelles fixes et toujours les memes dous certaines lignes," he succeeded in obtaining a number of mal-formations according to his preconceived plan. And such experiments have been repeated on dogs, pigeons and poultry with like success.

From these facts, and others which may be mentioned, it seems safe to say, that each new individual inherits a predisposition to the habits and structure, accidental or otherwise, of those from whom it is derived. When all the paternal influences concerned in moulding the constitution *in utero* are appreciated, we see the appropriateness of the saying of S. T. Coleridge,—"that the history of a man for the nine months preceding his birth would probably be far more interesting, and contain events of greater moment than all that follows it."

It may be noticed in this connection, that accidental and acquired mental habits and peculiarities, as well as physical, are susceptible of transmission. Mr. Knight, who investigated the subject for a series of years, tells us, "that a terrier, whose parents have been in the habit of fighting with polecats, will instantly show every mark of anger, when he first perceives merely the scent of that animal. A young spaniel brought up with this terrier, showed no such emotion, but it pursued a woodcock the first time it ever saw one. The offspring of the shepherd's dog in active service, instinctively follows the flock, while, if his father or grandfather have been taken away from this occupation, he will have lost the art, and be difficult to teach." (The Body and the Mind, by Geo. Moore, M.D.) "It is worthy of notice, that the amble, the pace to which the domestic horse in Spanish America is exclusively trained, becomes in the course of some generations hereditary, and is assumed by the young without teaching." (Encyclopedia Brit.) F. Cuvier observes that "young foxes in those parts of the country where traps are set, manifest much more prudence than even the old foxes in districts where they are less persecuted." Birds on newly-discovered islands soon learn to dread man, and this dread they transmit. A recent writer on hereditary influence says: "We had a puppy, taken from its mother at six weeks old, who although never taught to beg, an accomplishment his mother had been taught, spontaneously took to begging for everything he wanted, when about seven or eight months old; he would beg for food, beg to be let out the room, and one day was found opposite a rabbit-hutch, begging for the rabbits."— *College Journal of Medicine.*

"IS CHARCOAL LIABLE TO SPONTANEOUS COMBUSTION."—Certain Philadelphia chemists claim that charcoal is liable to spontaneous combustion, when exposed to moisture, while the *Scien-*

tific American (whose opinion we regard as having great weight,) says: "We have seen charcoal dust exposed for long periods of time to moisture and the atmosphere, and never knew an instance of spontaneous combustion caused thereby." In conversation with several gentlemen the other day, one of them observed, that charcoal, long exposed to moisture, and suddenly dried or heated, would ignite. He had known well authenticated instances of fires from such a cause, and of no article about his premises (he was a manufacturer) was he more careful, than of the disposition of charcoal. Now, this is a question of no little importance, and we hope it will be investigated.

EXTRAVAGANCE IN DRESS.

Rev. Dr. Cooke, one of the editors of the *Puritan Recorder*, who has been writing for his paper a series of letters from Saratoga, winds up his observations on life at the Springs with some remarks that are of special interest to the ladies He says:

This is the last of my series from this place. And there is but one topic more on which I care to speak, and that is the idol of the place, to wit, *Dress*. Those who have resided here even for a short time, have had opportunities to see the absurdities of fashion in this respect, in a strong light. In a secular and moral aspect, they are a fair match for the fashionable preaching of which we have spoken. Indeed, the fashionable lady at the Springs comes to a task of dressing, which is not to be envied. Most of her waking hours, even if she have no hops nor balls to dress for, are laborious hours. For dressing is her substantive employment; it is for this that she has come to the Springs. So she must on first waking in the morning, dress for her walk to the Springs, then she must come home and put on another harness for breakfast. Then she must unharness and harness up wholly anew for dinner; then for tea, all the labor of changing her cumberous harness must be repeated. This often involves more than she can do alone. The hair-dresser must be called in, and there must be a toil of currying as well as harnessing. This is an expensive as well as laborious work. Judge of this from a single case. A lady was here not l ng since, and when about to leave, she told the landlady in all soberness, as if it was a matter of course, that she had been here thirty days, and that she had only thirty changes of dress, and therefore she could stay here no longer. For she could not wear the same dress twice in the same place. She must now, as a matter of economy, go to Newport, where with the same dresses, she could spend thirty days more. This is a fair sample of the fashionables here. Every summer brings thousands of just this class of miserable creatures, slaves of absurd fashions, here.

Think a moment of the expense of such an outfit for the Springs. The expense of her thirty dresses, with all the laces and jewelry to match, could not be less than three thousand dollars. That is, her dress for thirty days must cost her a hundred dollars a day. And among all the visitors at the Springs, during the season, there cannot be less than three thousand women so expensively dressed. If so, the aggregate expense of equipping these butterflies for one season, must be nine millions of dollars, which is a very considerable fraction of the revenue of the United States Government. Is it a wonder, that so many of our wealthy merchants fail? True, many of these women are the wives and daughters of pill-pedlars and yeast-venders, and the like, who can afford it. But many of them also are exhausting the capital of regular merchants.

But the absurdity of this business more fully appears, if we reflect how much of this extravagance looks to marriage; and how it defeats its end. Daughters are put on this course of extravagance to make them the more attractive candidates for marriage; and the effect is to render their marriage, to any young man of sense, impossible. Young men, who have their fortunes yet to make, cannot safely marry a woman who has been trained to spend a fortune in a single season. So that this process, instead of subserving marriage, serves to frighten away the very young gentlemen whom it seeks to dazzle and attract. The thing may be seen on the surface, in the fact that at this watering-place there are ten young ladies to one gentleman. Why is it? The young gentlemen are but beginning in life, and if they are worth having, they have not the means to face such an expensive life as the young ladies are leading here.

BE CONTENT.

Mistaken mortal, ever fretting,
Grasping, grinding, groaning, getting, —
Be content!

If thou hast enough, be thankful,
Just as if thou hast a bankful—
Be content!

If fortune cast thy lot but humble,
Earn thy bread and do not grumble—
Be content!

Have the rich, think'st thou, no trouble?
Twice thy wealth; their sorrow double—
Be content!

List the lore of learned sages,
Those wise men of the Grecian ages—
Be content!

Their rack'ning up of all earth's riches
Was compassed in one short phrase, which is—
Be content!

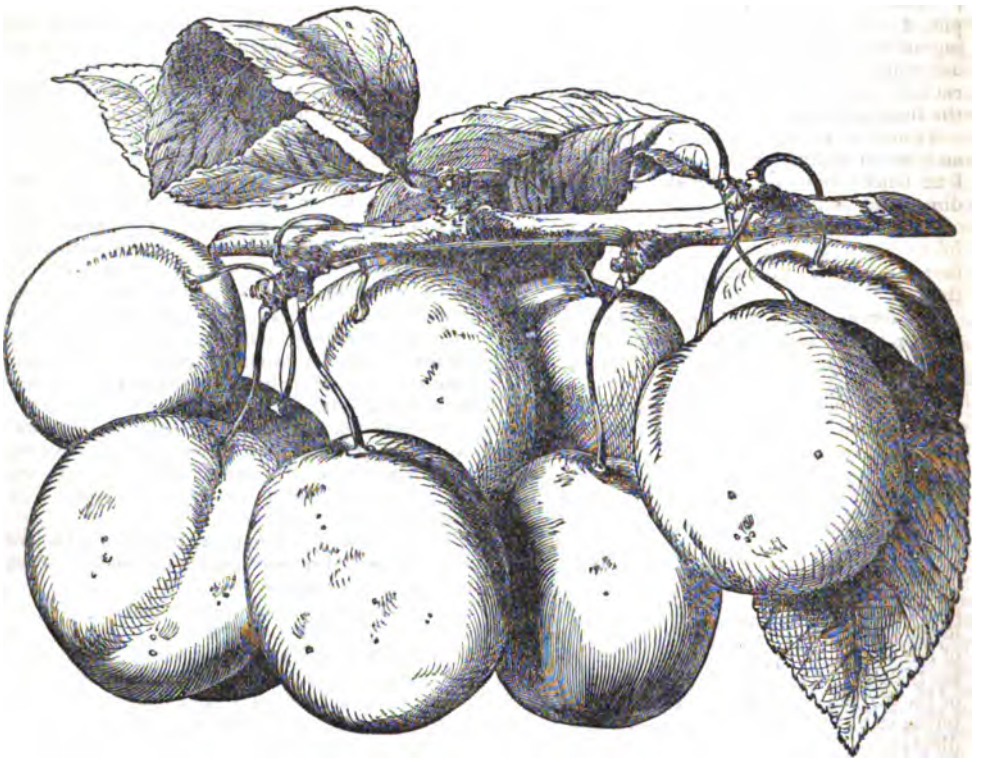
The rich man gets with all his heaping
But dress, and drink, and food and sleeping—
Be content!

Though in the sleep the rich men gain not,
Poor men sleep when rich men may not—
Be content!

When winds about thy dust shall scatter,
Where goes thy gold—to thee what matter?
Be content!

Remember, thou for wealth who rakest,
"Naught thou broughtest, naught thou takest."
Be content!

☞ From a calculation carefully made by an intelligent gentleman in Columbus, Ohio, we learn that the eggs annually produced by hens in that State, would pay the yearly interest on her public debt.



BLEECKER'S GAGE PLUM.

The subject of the beautiful engraving which we present the reader with this number, was handed us last autumn by Mr. H. P. Wiswall, of Marlborough, Mass. We were sufficiently well pleased with it to have it drawn and engraved, and believe the reader will agree with us in pronouncing the illustration a beautiful work of art.

Downing says it is a "fruit of the first quality; remarkably hardy, and a good and regular bearer. It was raised by the late Mrs. Bleecker, of Albany, about thirty years ago, from a prune pit given her by the Rev. Mr. Dull, of Kingston, N. Y., which he received from Germany. — It ripens the last of August, from a week to two weeks later than our Yellow Gage. Branches downy. Fruit of medium size, roundish-oval, very regular. Suture scarcely perceptible. Stalk quite long, an inch or more, straight and pretty stout, downy, slightly inserted. Skin yellow, with numerous imbedded white specks, and a thin white bloom. Flesh yellow, rich, sweet, and luscious in flavor. Separates almost entirely from the stone, which is pointed at both ends. Leaves dark green. Easily distinguished from Yellow Gage by its longer and stouter stalk."

STONE FENCING.

The best sized stone for a fence, is the largest which can conveniently be moved; and the best shape is slab or flat; but in the general all sizes and shapes must be used, as to be had.

In building a house, the stone must be tied in every direction; in building a fence they should be tied crosswise only, for it cannot fall lengthwise.

Many fences which I see are made for beauty instead of strength; the consequence is, presently down falls the fence,—and then for patch-work, and away goes beauty. A stone-mason is not the man to put up a stone fence, for he will be too tedious and neat, consequently too costly.

To make a stone fence strongly and expeditiously, will require several months experience.

Having determined on the proper site for your fence, deposit as many stone on either side as you think will be sufficient. If the site is level or nearly so, no further preparation is necessary,

but stretch your line and go to work. It is well to use two lines, one on each side, so that there be no shifting about of the line. Raise your line or lines some eight inches or more from the ground, so that the foundation stones may be placed underneath, thus making a shoulder or jog on the exterior of the fence, of some inches, depending on the size of the stone. Lay the largest rock first, and the largest continually, until the fence is complete.

Three feet at the base, four feet six inches high, and ten or twelve inches at the top, is an excellent fence; but with good stone a body of less dimensions will suffice.

As the fence rises, lift the line, and be mindful to begin to batter or slope the wall at the foundation, and continue to batter uniformly to the top.

My fences lately made look rough, because I pay no attention to a face stone, but head all to the line, both sharp-pointed and rough. The stones should be laid flat, and kept level, to do which it is sometimes necessary to fill in with small stones. Be slow and particular in laying the foundation, a little faster in the body, and near the top small stones require a quick motion, or but little is done,—always being mindful not to leave a stone to jostle in the wall.

To build a stone fence horizontally on a hillside, the lower half of the track should be dug down to a level. On this level build as above recommended, putting all the best stone in the lower side of the wall, for there is little danger of a fence falling up hill. And remember to batter the lower side in proportion to the steepness of the ground; so that if very steep, all the battering shall be below, and the upper side perpendicular.

When the stones are at hand, a man who understands the business, can put up from one and a half to four rods of fence in a day; the amount depending on the size and quality of the stone.

I have a man now making stone fence for me, boarding himself and gathering his own stone, at four shillings the rod, who is averaging two and a half rods the day. I am satisfied that if the stone were at hand he would make from four to five rods the day. But the stone are good, and none more than thirty feet distant.

After a fence is two feet high, I can head on the stone as fast as two men can hand them to me. The great art is dropping the stone in the proper place, so that no further handling shall be required. About one hundred and eighty common sized stone will build a rod of fence. Work nine hours in the day, and handle one stone the minute, and you will have made three rods of fence; and surely a man can do this.

At this work at least two men should work together, particularly where the stones are large. The tools required are a grubbing hoe, crow bars, and large hammer,—and drills where blasting is necessary. A piece of iron an inch square and four feet long is all sufficient for a crow-bar. Hammer it round about two-thirds its length, and round the point a little, and it is ready for ripping up stone.

He who has the stone should put them into a fence, particularly if he is scarce of timber. And if he has the timber, better sell it with the land, and expend the proceeds in stone work.

Where large stones are scarce and small ones plentiful, the foundation of a fence may be made of the small ones, provided broad stones are placed on these,—being mindful to make the foundation about four feet wide; and it would be well to run a large plow furrow on each side, casting the earth inward, so as to make a trench for holding the foundation stone.

Where stones of all sizes are scarce, a good fence can be made of stone and wood. A fence two feet four inches at the base, three feet high, and six inches at top, will require only about half the stone of a fence three feet base, four and a half feet high, and twelve inches top. By laying a rail on the top of a three-foot stone fence, driving stakes on either side, and capping with poles, you will have a good fence about four and a half feet high. The stakes should be locust, and the poles should be chestnut—and the longer the poles the stronger the fence, and fewer the stakes required. If you have the chestnut but not of suitable size, you can with maul and wedge soon make them suit.

A stone fence will last as long as one could desire; a rail fence must be renewed every twenty or thirty years, although of chestnut. A wood fence requires continual repairs, a stone fence needs but little attention.

In the general, to make a stone fence, the cost will not exceed more than three times that of a rail fence; and where the stones are taken from a valuable field, a credit on cost should be given for their riddance.

The Virginians pay taxes on too much land; they should own much less, and fence up and take better care of that they have. Land not worth fencing is not worth having.

For every stone which you pick up and move you shall have a credit; for every valuable tree which you cut you shall have a debt.

What did the Creator make all these stones for?—*Southern Planter.*

Cashmere Goats in Ohio.—We see it noticed that Joseph P. Ross, Esq., of Bainbridge, Ohio, has become the possessor of a male and female kid of the species of goats which are peculiar to Thibet. He will exhibit them at the Ohio State Fair, where they will no doubt prove objects of interest. Cashmere has long been celebrated for the manufacture of shawls, the beauty and texture of which have always excited the admiration of Europeans and Americans, and made them a prominent article of dress in the fashionable world. The wool from which these shawls are fabricated forms the inner coat with which the goat is covered, and has caused that animal to be an object of great interest to the mercantile community and the *beau monde.* Attempts to introduce this breed into India have been made, but without success. It is peculiar to Thibet where alone it flourishes. The attempt to introduce it here will, no doubt, meet with a similar fate.

To Prevent Cows Losing their Milk.—Francis Van Doren, of Adrian, Michigan, had a valuable cow that lost much of her milk, and found a preventive in placing an India rubber ring around the teat after milking. He says this is effectual.—*Rural New-Yorker.*

For the New England Farmer.

"RURAL LIFE."

Matter of astonishment as it may seem, the "*Atlantic Monthly*," that compendium of elegant literature, has reached the "farmer's home," and there its occupants, who, in the language of one of its contributors, "contemn beauty and those who love it, and glory, above all things, in brute strength and brute endurance," have read its dainty pages. And what then? Why, nothing, —farther than that one of the "drudges," so called by the writer of the article entitled, "Rural Life in New England," dares to consider for a moment, whether the article is a correct and just picture of farmers' homes, generally, as they are found in New England, or a gross misrepresentation.

We cannot rid ourselves of the impression that as our youthful associations are more deep and permanent than those of mature years, the writer of that article must have passed his early "years in one of those disgusting heathenish homes" he describes, and then and there, the impressions he received must have, "like the red letters on our bank bills, struck through." Else, which we can hardly believe to be the case, the writer may be a worn and weary pilgrim of generations long past, who, enfeebled by age, sits in one of the "square-brown-one-chimneyed houses," ignorant of the passing time; no great-grandchild near, for disposition never could be soured, as we imagine his to be, if the soft fingers of childhood were resting in his hard palm, or the velvet kiss felt on his wrinkled cheek.

But we will let the writer pass, and just look at one or two parts of his picture, as it hangs before us. In describing the "farmer's home," the writer evidently intends the description to be taken as a general truth, for he speaks of "happy exceptions." That his "outline of the farmer's home generally" is a false representation, and that the "happy exceptions" he refers to are the only just pictures of farmers' homes in New England, generally, we believe.

Leaving the *external* description of the farmers' home for the "other side" to defend, we will proceed to the inside. In passing, we will only say to those who were so unfortunate as to have "first seen the light," in one of the "square,brown, one-chimneyed houses," and many such there are, in our own and foreign lands—men whom the nations have delighted to honor—we say to them, blot out all pleasant memories of childhood, come back, come and purify the unsightly things which your ignorant grandsires of a century ago erected; purify them, with fire, if need be, lest your fair fame be tarnished when it is said of you, "Born in a square, brown, one-chimneyed house!" Here is the description; have ready, dear reader, your supply of *Frangipanni*, or any favorite perfume.

"We enter the house at the back door;" (you've no business going in at the back door, it shows your ill-breeding,) "and find the family at dinner in the kitchen. A kettle of soap-grease is stewing upon the stove, and the fumes of this, mingled with those that are generated by boiling the cabbage which we see upon the table, and by perspiring men in their shirt-sleeves, and by boots that have forgotten, or do not care where they have been, make the air anything but agreeable to those who are not accustomed to it. This is the place where the family live. They cook everything here, for themselves and their hogs. They eat every meal here. They sit here every evening, and here they receive their friends. The women in this kitchen toil incessantly, from the time they rise in the morning until they go to bed at night. Here man and woman, sons and daughters, live in the belief that work is the great thing, that efficiency is the crowning excellence of manhood and womanhood, and willingly go so far into self-abasement, sometimes, as to contemn beauty, and those who love it, and to glory, above all things, in brute strength and brute endurance."

If that is not a gross caricature of farmers' homes as found generally in New England, then light is darkness and darkness light. It is a disgusting and degrading picture, and more, it is a dishonest representation. We appeal to every one conversant with farmers' life, to unite with us in declaring the truth which we now state,—that in the rural districts, family life answering to this description is held up as a fit subject of merriment and scorn, and our city friends can testify that they, with us, have enjoyed many a scene of merriment at the expense of these rare exceptions —these vulgar, behind-the-times realities, for we do not deny that such there are, but few and far between, relics of we know not what.

By the way, we respectfully request our city friends, believers in the truth of the article in the *Atlantic Monthly*, who contemplate rusticating among us, to bring the substantial in such quantity and quality as suits their taste, unless they wish to enjoy cabbage alone. "Stewed soap-grease," we have never been treated to the dish, and rather conclude not to include that in our "bill of fare."

Let those who believe this a true description, no longer dream of breathing fresh air, in the country. If here is the place where the family live, "the female part," from morning till night, "dream not of going into the open air, lest you astonish the natives; when with the Romans, you must do as the Romans do."

The writer certainly must have the credit of originality, in his description, for never in our reading have we seen anything describing country life like this. If we take the writer's ideas to be truth, why, we are bound to believe that vulgarity and coarseness are an essential part of character, as it is usually developed in farming communities, and of course, there can be no craving for the beautiful in nature, art or literature. Gray, Goldsmith, and other writers who have dared to teach us that 'mid the "homely joys" of the rural homes, we were to look for love and sympathy, peace, charity, friendship and truth, these, their works, must be laid aside as poetic fancies without foundation, and we must receive for truth, that from which our better feelings revolt. This we will not do. "People above us and below us, we must find," and we have yet to learn that in the country places there is less respect "cherished for age, for friends, for poverty or weakness," than in the cities.

Were one of these specimens of "self-abasement" to visit the city and give a description of city life, would it be fair to select the vicious and

degraded, the wholly vain and frivolous, and declare that of such were the majority of its inhabitants?

Again, the writer speaks of "the deterioration of agriculture in New England." Be this as it may; we do not believe the character of the people in the farming communities has deteriorated. The writer of the article referred to says: "There is probably no better exponent of the farmer's life than the farmer's home." Let any one who lives in, or visits the country, say whether the "square, brown houses," with the arrangement of the "barn and out-buildings," as described above, is the present fashion, or one of a past age. His specimens are certainly relics of the past, and not to be found among the many convenient and pretty farm-houses of the present time.

If we were to give the united testimony of those "who know whereof they do affirm," it would be that the mode of life among farmers, has greatly improved within the last thirty years, in everything really essential to happiness!

But when we come to that clause describing the condition of the wife and mother on the farm we blush for very shame, that one can be found in our midst who cherishes such degrading views of his fellow man—ay, of a large proportion of New England men! We care not to meddle with this clause, but if we believed the one-half of it to be truth, we would entreat the "wives and daughters" of New England farmers, (excepting "the happy exceptions,") to follow fast in the footsteps of Mrs. Lot, of old, in all save the "looking back," although even that were preferable to remaining behind, for so many "bent and clumsy," "pillars of salt," standing thickly over this part of our fair land, would prove warning beacons in all coming time. Flee at once to "the large social centres," ye who believe ye are part and parcel of the "farm-stock," look not behind ye, but "look," in the fearful language of the writer referred to, "look at your hands! look at your face!" (if among your treasures you have dared to take a piece of looking glass,) "look at your bent and clumsy forms!"

Drop one tear of pity, as ye think of the ignorant and lonely beings ye have left behind; at any rate, get to the "large, social centres," where it is presumed ye will thenceforth "be regarded," to use the words of the writer, as "*sacred beings.*"

Brentwood, N. H.

TO KEEP BUTTER HARD AND COOL.

A writer in the *Scientific American* recommends to the ladies a very simple arrangement for keeping butter nice and cool in the hottest weather. Procure a large new flower pot of sufficient size to cover the butter plate, and also a saucer large enough for the flower pot to rest in upside down; place a trivet or meat stand, (such as is sent to the oven when a joint is baked,) in the saucer, and put on this trivet the plate of butter; now fill the saucer with water, and turn the flower pot over the butter, so that its edge will be below the water. The hole in the flower-pot must be fitted with a cork; the butter will then be in what we may call an air-tight chamber. Let the whole of the outside of the flower-pot be then thoroughly drenched with water, and place it in as cool a place as you can. If this be done over night, the butter will be as "firm as a rock" at breakfast time; or, if placed there in the morning, the butter will be quite hard for use at tea hour. The reason of this is, that when water evaporates, it produces cold; the porous pot draws up the water, which in warm weather quickly evaporates from the sides, and thus cools it, and as no warm air can now get at the butter, it becomes firm and cool in the hottest day.

For the New England Farmer.

HINTS ON KEEPING SHEEP.

It has been stated in some of the agricultural papers of the day, that sheep are profitable to the farmer, not only from the product of wool and mutton, but from the tendency which their keeping has to improve and enrich his land for all agricultural purposes.

Sheep are profitable to the farmer who has a broken or uneven farm, and his pastures have been suffered to grow up to bushes, or where the soil has become exhausted by excessive feeding, and will produce more of the grasses, excepting what the New England farmers term June grass or white top. Land that has been thus reduced will keep sheep better than any other kind of stock; but to think of eradicating the husks, and thereby give the pasture a smooth appearance, and have white clover flourish in the place of June grass, is a supposition not generally acknowledged by the community, where experience has proved to be the better teacher in regard to what kind of stock will best improve our land.

For instance, where a pasture is in good condition and produces clover, timothy and red-top, let it be stocked with sheep, and in most of our hill towns in Cheshire county, or even in the State, in fifteen or twenty years, timothy or clover will be nearly or quite eradicated, excepting where the sheep may chance to lay, which is generally on the brow. In those localities white clover may flourish to some extent, but it will be refused by the animals; therefore, it will be of no practical utility to the pasture unless a portable fence is substituted, and that would not pay in so rough a country.

It has been supposed by some that as many cattle and horses can be kept with a certain portion of sheep as without them, and without any injury to the farm for other purposes. One writer states that a proportion of six sheep to a horse and cow on the same keeping; that would be allowing about one-fifth for rubbish for the sheep on which to feed; consequently, the quality of hay must be an inferior kind.

Sheep kept on rubbish left by other animals, may survive but cannot flourish in the winter season, without extra feed. In grazing time, sheep don't stop to crop the rubbish until they have exhausted their curiosity in search of clover or some of the best grasses, and in a pasture that will keep six sheep, one horse and one cow, the sheep, I venture to say, will consume one-half of the clover in an ordinary pasture. Consequently, instead of eating the poorest, they will consume the very best of the feed.

The farmer is more subject to loss on sheep than on neat stock; very few wool growers, who

keep from one to two hundred sheep, but will realize a loss annually of ten per cent. Although constant care and attention to their wants are carefully looked after, yet disease overtakes numbers of the flock; while they are treated with the utmost vigilance as rare animals it would do very well; but this is practical only with a very limited stock.

Let the principle be observed, for experience has shown that between sheep well and tolerably fed, there is a difference of one-third, in regard to the quantity of wool obtained. And then again, it is only by such abundant food that the smallest amount of mortality, as well as the largest increase, and that development of their animal organism which gives the sheep in all periods of its age the highest capacities of breeding and fattening, can be secured. J. WHITNEY.

East Sullivan, N. H.

For the New England Farmer.

LETTER FROM MAJOR FRENCH.

Lancaster, Mass., Sept. 13, 1858.

DEAR BROWN:—My letter of Aug. 3d, dated at Danvers, closed with a promise that I would say something of Mr. R. S. FAY'S beautifully romantic farm at Lynn, when I next wrote.

It was so long ago that I have almost forgotten what I intended to say. One thing attending Mr. Fay's farm worthy of note, is the immense number of forest trees he has planted upon it. Not only the elegant avenue of perhaps a quarter of a mile is bordered with them, but acres and acres of his land are overspread with them, and of the most choice kinds, too. Mr. Fay is working well for posterity, and if the blessings of the living are available to those who have gone hence, Mr. Fay will have his reward.

I wish I could describe to you Mr. Fay's farm, but I cannot. It is formed of hill and vale, and one side, at least, borders on a beautiful little lake. The hill part is very pleasantly impressed upon my mind by one of Mr. Fay's witticisms. There happened to be on a hill in plain view from the lawn fronting Mr. Fay's mansion, some of his men loading hay on to a cart. The prospect, itself, was very picturesque, but the men, oxen, cart and hay, added so much to the beauty of the scene, that it was remarked upon, when Mr. Fay observed "that it was his delight to furnish his visitors with handsome views, and he always kept those men there with their cart and oxen, to commence loading hay when visitors came!!" I hardly knew which most to appreciate, the cleverness of the idea, or the cleverness of the wit.

We had only an hour or two to spend with Mr. Fay, so he hurried us about his place, and showed us as much as would have occupied a week, properly to appreciate. A pair of most beautiful heifers and a bull (Ayrshire, I believe, but am not certain) were our special delight. He said he had been offered $500 for the heifers, by a gentleman in Washington City, and refused it.

In farming utensils I think Mr. Fay cannot be beat *on this side of the Atlantic*, for many of his "gimcracks" were from England, and to a Yankee eye which had never looked upon the like, they were funny enough. An English plow, not quite a rod long, perhaps, but, like Banquo's line of kings, amazing long, and resembling the man's horse, that he said could stretch himself into a horse and a half, was among the curiosities of the place; and an English drill machine, (I think it was,) at any rate it was a thing, that appeared to me about as intricate as a carpet loom, with all its "fixins," and I should think it would require considerable drilling before a man would perfectly understand the use of it, was also on exhibition. They were curiosities indeed, to me at least, and I was glad to see them, but I really do not believe *a common farmer* would find them a profitable investment, and I somewhat doubt whether Mr. Fay does.

From Gen. Sutton's, where my last letter was written, I went to Boston, and had the pleasure of taking you by the hand for the first time since my present visit to New England. Since then, as you know, I have been almost constantly moving. Your columns bear witness to my visit at the Isle of Shoals—but there is not much farming done there! We did up considerable fun, however, and ate considerable fish.

You may have a faint recollection of my visit, after my return from the Shoals, to a certain Ex-Lieut. Governor of Massachusetts, where a chowder party made one grand feature of the visit not soon to be forgotten; and where, for the first time in thirty years (I won't go too far back) I held a breaking-up-plow, and I turned a good furrow, too! But, my stars! what a difference between the iron plow I held last week, with its elegantly curved mould-board, its cutting knife, its graduating roller under the beam, and the team of one yoke of oxen and a horse that drew it, and my honored father's old breaking-up plow, with its wooden mould-board, roughly strapped with iron, its beam, *that was a beam*, almost heavy enough to work into a beam for a barn, with a sort of shoe-shaped affair mortised into it, to keep the plow from going in too deep, *and a man to ride on the beam to keep it in far enough*, and then four or six full "six-feet" oxen that hauled it—

"I tell yeou"
That was the way we 'put her through,"

in those days, and that was plowing! Modern improvement is about as manifest in the improvements made in plows as in anything I know of.

I flitted from Concord here the other day, and I propose to entertain you with a short account of my goings-about in this beautiful town, and what I have seen in my rambles.

They call New Haven "The City of Elms." I am not well enough posted as to the trees in New Haven to form an opinion as to the propriety of that appellation, but if there is a *town* in New England that deserves the name of "The town of Elms," Lancaster, in this old Commonwealth, is that town.

Turn your eyes which way you will, from almost any locality here, and they are greeted with magnificent elms. The Saturday prior to my arrival here, the last limb of an old elm, which measured, it is said, 22 feet in circumference, fell, and two men have been constantly engaged in chopping upon it, for an entire week, and it is not half chopped into firewood yet! I measured an elm between the village and the Female Industrial School, a little off the main road, and,

five feet above the ground, it measured 21 feet 9 inches. At the ground it would measure nearly, or quite, 30 feet. Another, directly on the road, measured between 17 and 18 feet.

I have visited the Industrial School for girls twice since I came here. Once on a week day, and yesterday (Sunday) afternoon, and was very much gratified. At my first visit we were shown through the buildings by the gentlemanly Superintendent, Rev. B. K. Peirce, and found every thing in the very best order, and the inmates busily engaged in different ways; the most of them were knitting, others seemed to be specially charged with the daily work of the establishment. At the request of Mr. P. a number of the girls seated themselves on the lawn, and while plying their knitting needles, they sang to us, in perfect time and tune, a number of songs, in a manner that would not discredit professed musicians. They all appeared happy and contented, and were treated by Mr. Peirce more as if they were his children, than his scholars. Yesterday afternoon I attended the religious services at the Chapel, and I do not remember to have passed a Sunday afternoon when I was more pleased or interested in religious services. They were conducted with great propriety, and proper solemnity, by Mr. P. After the evening lesson of the Episcopalian church, and singing, the Sunday school lessons were recited, under the direction of two young misses, whom I took to be inmates of the school, selected, probably, by the matrons. Everything that was recited was well selected and perfectly committed.

There were present three gentlemen, part of a committee of Legislature, to examine the benevolent institutions of the State, Messrs. HALE, of Boston, BROOKS, of Concord, and MORRISSEY, of Nantucket. They appeared to be very much gratified, and Mr. Hale, at Mr. Peirce's request, made some very appropriate remarks. The services continued for two hours or more, and when I left, I believe if you could have seen my heart, you would have found printed upon it, "God bless the Commonwealth of Massachusetts."

[We learn from one of the gentlemen present that our correspondent, Major FRENCH, being called upon by Mr. Pierce, made some brief and appropriate remarks. He likened old Massachusetts to an embodiment of philanthropy, stretching forth the arms into every corner of the Commonwealth, and gathering up the poor and needy and leading them in the paths of virtue to useful and happy lives. He spoke feelingly of life as a state of trial and progress in our mental and moral powers; happily quoted the stanza from Longfellow—

"Life is real, life is earnest,
And the grave is not our goal—
Dust thou art—to dust returnest
Was not spoken of the soul,"

and closed, leaving his audience to feel that they belonged to the great brotherhood of man, and that they were still regarded with a deep interest.]

Let politicians say what they will of the old Bay State, in regard to her present government, policy, &c. They cannot wipe from her statute book the glorious pages whereon are recorded her noble charities! There she stands as much above the petty malice and the *petty minds* of those who attempt to revile her, as Bunker Hill Monument does above the mud pile of the scavenger of the gutters!

Perhaps I will pursue the subject when I return to Washington, I have written enough now.

Ever faithfully, B. B. FRENCH.

SCIENCE ANSWERING SIMPLE QUESTIONS.

Why is rain water soft? Because it is not impregnated with earth and minerals.

Why is it more easy to wash with soft water than with hard? Because soft water unites freely with soap, and dissolves it instead of decomposing it, as hard water does.

Why do wood ashes make hard water soft? 1st. Because the carbonic acid of wood ashes combines with the sulphate of lime in the hard water, and converts it into chalk. 2d. Wood ashes converts some of the soluble salts of water into insoluble, and throws them down as a sediment, by which the water remains more pure.

Why has rain water such an unpleasant smell when it is collected in a rain water tub or tank? Because it is impregnated with decomposed organic matters, washed from roots, trees or the casks in which it is collected.

Why does water melt salt? Because very minute particles of water insinuate themselves into the pores of the salt, by capillary attraction, and force the crystals apart from each other.

How does blowing hot foods make them cool? It causes the air which has been heated by the food to change rapidly, and give place to fresh cool air.

Why do ladies fan themselves in hot weather? The fresh particles of air may be brought in contact with their face, by the action of the fan; and as every fresh particle of air absorbs some heat from the skin, this constant change makes them cool.

Does a fan cool the air? No, it makes the air hotter by imparting to it the heat of our face, but cools our face by transferring its heat to the air.

Why is there always a draft through keyholes and window crevices? Because the external air, being colder than the air of the room we occupy, rushes through the window crevices to supply the deficiency caused by the escape of warm air up the chimney, &c.

If you open the lower sash of a window, there is more draft than if you open the upper sash. Explain the reason of this. If the lower sash be open, cold external air will rush freely into the room and cause a great draft inward; but if the upper sash be open, the heated air of the room will rush out, and of course there will be less draft inward.

By which means is a room better ventilated? By opening the upper sash, because the hot, vitiated air, which always ascends towards the ceiling, can escape more easily.

Why does the wind dry damp linen? Because dry wind, like a dry sponge, imbibes the parti-

cles of vapor from the surface of the linen as fast as they are found.

Which is the hottest place in a church or chapel? The gallery.

Why is the gallery of all public places hotter than the lower parts of the building? Because the heated air of the building ascends, and all the cold air which can enter through the doors and windows, keeps to the floor till it has become heated.—*Dr. Brewer's Guide to Science.*

For the New England Farmer.

LETTER FROM JUDGE FRENCH.

Exeter, N. H., Sept. 20, 1858.

MY DEAR BROWN:—To-morrow commences my labor in other fields than those of agriculture. Before taking leave of my farm, it may perhaps be pleasant to talk with you and our readers a few minutes of what has been going on the past season, here at The Pines, in the way of farming.

"Do you think you make anything by your farming?" is a question which I am frequently called on to answer, and I will answer it here, thus: In the farming which I undertake for profit, I get my money again with a good profit, but in the various experiments which I try, as matter of curiosity and education, I fare much like other people. Sometimes I succeed and sometimes fail, but I gain usually what I seek, that is, knowledge that may be useful to myself and others.

I hold it to be as rational for a gentleman to expend a hundred dollars in reclaiming an acre of swamp and making a handsome acre of it, even if he derives no dollars from it, as to expend five hundred for a fancy span of horses or for dinners and champagne. My farming is my amusement. One of my neighbors, a gentleman of wealth, adopts the principle that he will do nothing on his farm that will not pay a profit, nothing that would not be advisable for a farmer who gets his living by hard work. I hold to no such doctrine. My failures may be as valuable as my successes, if properly improved. One great advantage from an experimental farm, is, that we may learn from actual trial what things ought not to be done. Nobody should expect a profit from such establishments.

Complaint is often made of your State Farm at Westboro', that it is expensive, and the Solons of New Hampshire are beginning to complain that the Reform School Farm, at Manchester, does not pay its way—a farm entirely run down, almost every acre of which needs thorough draining, and without a tenth part of the live stock necessary to carry it on. The expectations of people of profits from land are most unreasonable. A man has a hundred-acre farm worth, say $4000. Three-quarters are wood and pasture, the rest tillage and mowing. He plants, say six acres, oftener not more than four, and performs all the labor, with the help of one hired man. What has he then right to expect as a fair business profit? First, the interest on his capital, which is $240; next, enough to pay his "help;" thirdly, for compensation for his own labor, at proper rates for such labor, which is next thing to mere manual labor. What does he get? He gets his rent, his fuel, milk, butter, potatoes and garden vegetables, a great part of his breadstuff, the use of a horse for family purposes, and money enough to pay taxes, repair buildings and tools, clothe his family, giving his children all their time for education, which in other countries would be spent in hard work and ignorance—pay his "help" and doctor's bills, and spend some time and money in electioneering and other innocent recreations. Now suppose he has not a dollar more at the end of the year than he began it with, has not he done a fair business? His own labor besides board cannot be reckoned more than $200—and that with the interest on his capital makes $440—and he somehow makes the farm yield him a living that would cost and does cost a man occupying a hired house, much more than that.

The truth is, that farming, even in hard New England, does pay better than any other business, that is conducted on so small a capital, with so little of what may be termed skilled labor.

At public model farms and the like, it is proper to test new theories, to keep for inspection specimens of different breeds of live stock, a variety of improved implements, to try new seeds and modes of culture. Thus one published failure may save a thousand repetitions of an experiment all over the land.

Let us then be reasonable in our expectations of private and public operations in agriculture.

To answer directly the question as to the result of my own farming, I have no doubt that I live on my farm, for less money, than I could live in the same comfort and general style in a hired house. My farming not only pays interest and expenses, but enables me to do something, without a loss, to benefit those who have not means or leisure to indulge in the fascinating pursuits of experimental agriculture.

My corn, potatoes, mangold wurtzel and turnips are this year all on land underdrained with tiles, at fifty feet distances, and an average depth of four feet, on land on which three years ago no one of the crops could have grown at all, except, perhaps a half-drowned crop of potatoes. The average rain-fall hereabouts is thirty-six inches. The fall in 1857 was about fifty inches, and thus far this year has exceeded 1857. It is one of the wettest seasons ever known.

POTATOES.

My potato ground was plowed April 12th, and was dry enough. I drove a span of horses myself, and we plowed 1¼ acres in a day with the largest sized double plow. I was in Court till May 3d, and on the 4th we planted the potatoes. About five cords to the acre of compost was plowed in, with one horse, after harrowing the first furrows; then the land was opened in drills, with a small plow and the seed dropped, and covered with the plow. The crop was cultivated mostly with a horse—hoed once, and weeded after the crop was nearly grown.

I cut most of the potatoes, a fair sized Jackson white, into four pieces, and placed them fifteen inches apart in the drills, and the drills three feet apart. The rows are twenty rods long. For experiment, I cut the seed very small in one row, one eye in a piece, and placed them ten inches apart. In other rows I planted whole potatoes. On part of the piece I planted the Riley potato, cut and whole in the same way. The whole acre blighted somewhat about Aug. 15, until which the piece looked remarkably uniform and well. On the 7th of September, we dug the experimental rows, and a part of the others, and measured the product. There was no difference in size or quality or disease, between those whole and cut, or between those in quarters and smaller pieces. In seventeen bushels, there was not a half bushel of diseased potatoes, and they have not rotted in the cellar. The yield is about one hundred and fifty bushels to the acre, which is as large a crop as I dare to raise in these times. It is less work to plant potatoes in this way, but far more to dig them, and I do not think the crop is increased. My potatoes, as far as I can judge, are more free from disease than the average. I should expect this result on thorough drained land, which has never been too wet or too dry, a day during the season. I shall leave the rest of the crop in the ground till October, and then try plowing them out.

MANGOLD WURTZELS.

My mangolds were sown in drills on drained land—plowed twice with a double plow—then, after harrowing and rolling, opened in drills with a horse-plow, by a furrow each way, about thirty inches apart. Two cords, by measure, of fresh barn manure was put into the drills on 1¼ acre, and covered by two more furrows, rolled, and the seed dibbled in, one foot apart, on the 27th of May. No other manure was applied, except two bushels of salt sowed after planting. The crop is as fine as I ever saw. Some of the largest roots measure each eighteen to twenty inches in circumference. I cannot estimate the quantity to the acre, but there is enough! I shall have more to say about mangolds another time.

My corn is much above an average crop, and my Swedes sowed June 28th, are looking finely, and promise a good crop. Perhaps they would have done better sowed earlier, this moist season, though they will grow a month yet. They are on land newly broken up, and newly drained, and my corn land was drained last fall. We do not expect the full benefit of drainage so soon after the cold water is taken from the heavy sour soil, but my results, thus far, equal the highest expectations I have ever formed of the advantages of tile-draining.

My letter has spread wider than was intended, and I reserve for a future day what more I desire to say. Your friend, H. F. FRENCH.

For the New England Farmer.

BEE-HIVES—PATENTS—CORRECTION.

MR. EDITOR:—As a place has been found in your journal for the publication of an article, over the signature of "Norfolk," headed the "Bee-Hive," and dated at "King Oak Hill, April, 1858," which does great injustice to Mr. Langstroth, I doubt not that you will, as a matter of simple justice, admit the following to your pages.

"Norfolk" gives a statement, but not the name of its author; he must, therefore, be held responsible for this sentence: "if, as is stated, Mr. Langstroth has borrowed the only good thing there is about his hive from the Union, and gets cut off from its use in making his hive by the patent—his hive is good for nothing."

Common prudence would cause *most* men to hesitate before they brought such borrowing as is implied above to the charge of such a man as Mr. Langstroth, and men of even very large self-esteem would pause before they pronounced that the hive recommended by the most scientific apiarian on this side of the Atlantic had but one good thing in it; but perhaps "Norfolk" is "the man for the occasion," and is prepared to substantiate his charge and prove his assertion.

An intimate acquaintance with both the Langstroth and the Union hives, and the histories of their invention, does not permit me to doubt for an instant what that "only good thing" is which Mr. Langstroth is accused of borrowing. I have heard, from sources which can be given if required, that Clarke and his agents claim directly or indirectly, that Clarke is the inventor and present or future patentee of the triangular comb guide, which is now used in both of the hives mentioned; but "Norfolk's" article is the first appearance, to my knowledge, of such claims in print, and I have not thought loose verbal statements worthy of notice.

Now the fact plainly appears, from proceedings had before the Patent Office in the interfering claims of Langstroth, Clarke and May, that neither of the three contestants was the *first* inventor of the triangular comb guide, although each of them might have been an *original* inventor of it; the invention appears to have been first made in Europe, and is described in an English edition of Huber, published in 1841, to which the Patent Office referred, and dissolved the interference July 1st, 1857, since which time the comb guide

has been *public property*, and *free for all to use in any kind of hive.*

Prior to the time of writing this article, Sept. 2d, 1858, but one patent has been issued to Geo. H. Clarke, dated Jan. 8th, 1856, and that the public may be correctly informed of the extent of his rights, I will quote his disclaimer and claim. "Disclaiming the other devices, described individually or combined, what I claim is, the construction and arrangement of the hollow bars, D, in the manner and for the purpose set forth."

The bars, D, are hollow wooden cylinders, with an opening or slit for the entrance of the bees from beneath to within the bar, which extends the whole length of the bar; besides serving for passages for the bees from one comb to another, they also serve the usual purpose of cross sticks in box hives, viz., the support of the combs. There is nothing else patented about Clarke's hive. Take out the hollow slotted bars, D, and substitute solid wooden cylinders, or even hollow cylinders, if you please, provided they have no appertures in them by means of which the bees can pass from comb to comb through or inside of the bar, and the patented matter departs from Clarke's hive.

Should Mr. Clarke or his agents be rash enough to leave out from the Union hives the hollow bars, which support the comb and afford a passage to the bees, and should then mark and sell them as patented, even though the triangular comb guides and all other parts were left *just as before*, they would be liable under the 5th Sect. of the act of Oct. 29th, 1842.

It is not my purpose in this article to analyze the Union hive, or to exhibit wherein it is inferior to the Langstroth hive, or to point out its remarkably close resemblance to Mr. Quinby's hive, and wherein it is inferior to that. The Union hive has received the encomiums of "Norfolk," and he *ought* to be qualified to express an opinion on hives who without any hesitancy states, that "the only good thing" about the Langstroth hive is borrowed from Clarke's Union hive. Comment on such a statement will be surperfluous to those who are familiar with the Langstroth system, and to those who are not, I would say that there is a rich treat and a fund of information in store for them, and to be had from the perusal of the Rev. L. L. Langstroth's Treatise on the Hive and the Honey-Bee.

Really, that veteran bee-keeper, Mr. M. Quinby, who has used and tested the Langstroth hive for three seasons, and who now has about two hundred of them in use, and the host of bee-keepers of lesser magnitude, who use and more than approve the same hive and system of bee-culture, must use the Union hive if they would keep with "Norfolk's" movement, but whether that is an advance or retrograde movement I leave them to pronounce. J. B. C.

Wyoming, Mass.

VALUE OF CLOVER HAY.—H. Capron, Illinois, who has been largely concerned in the dairy business, (having sold six thousand dollars worth of milk in a single year,) inform the *Country Gentleman* that he made accurate experiments to test the comparative value of timothy and clover hay. These experiments, extending through a period of two years, were accompanied with an accurate weighing and measuring, and the food was changed, timothy to clover, and vice versa, once a month, and the results were that the clover hay yielded ten per cent. more than the timothy. It will be observed that this was not a single experiment, but a series of experiments extending for a long period. It is proper to state that the clover was well cured.

AGRICULTURAL FESTIVALS.

The autumnal "Musters" of the Farmer began in the early part of September, and have been holden in one place or another nearly every working day in the week since; they will not be concluded until late into October. The interest in them does not in the least flag among the farmers themselves, while the *institution* is gradually drawing around it men of all the professions and avocations among our people, and if it is not already established in our customs as firmly as "Thanksgiving Day" itself, will soon become so, if no baleful influences are suffered to tarnish the good reputation which it has certainly gained.

Those who have attended these autumnal gatherings for a series of years, and who have been careful observers of them, must have noticed in the communities where they prevail, and among the people who sustain them, a marked degree of improvement in the practices of husbandry; and they are improvements which are substantial, pervading all parts of the farm, and especially the homestead and its immediate surroundings. All over New England, the buildings, as a general thing, and the door-yards, present a very different aspect from their appearance thirty years ago. The houses more recently erected are of less pretension, covering less ground, but constructed with more conveniences and in an altogether better architectural taste, so that many comforts are obtained, while greater economy may also be secured. While the houses are generally smaller, the barns and granaries have increased to double their former size, and are better filled now than they were at the period to which we have referred. That sure criterion of farming, *the number of cattle kept, or the quantity of manure used*, is also another indication of substantial progress; so in the number of acres of tillage land, there being much less in quantity, while the *quality* of that improved yields a larger product than the whole did, leaving a large breadth to go first to pasture and then to re-supply the fuel and timber that had become exhausted. So in the kinds of products harvested, especially in the substitution of rich and nutritious grasses and succulent roots for winter fodder, instead of the coarse and innutritious meadow grasses which were once relied upon as an important part of the hay crop. So in reclaiming,

subsoiling, draining, and an improved, and at the same time more economical, mode of feeding stock.

It cannot be denied, with any show of reason, that these improvements have been greatly assisted by the introduction of our autumnal exhibitions, discussions, and associations. While they have excited and encouraged, they have afforded the means of comparison, so that there has been a constant endeavor to imitate, or perhaps to transcend the best results of the most successful.

We did not, however, sit down to write an essay upon the advantages to be derived from these festivals, and will proceed to give some account of those which have just transpired. They have been numerous, and our account must necessarily be brief of each.

The first that occurred, at Lowell, we gave an account of last week. The next in order was that of

THE MIDDLESEX SOUTH SOCIETY.

The exhibition was held at Framingham, and was a successful one in all respects. The President of the society is JAMES W. CLARK, Esq. Address by Ex-Gov. WASHBURN, upon the "*Duties of the Farmer*," which he very happily set forth and illustrated. He said that in no part of the universe did the farmer stand in a more favored position than in Massachusetts. We had a fickle climate and a hardy soil, yet there was health in our rough winds, and a market awaits the products of the farm. In concluding, he said that the character, importance and history of our people depended upon their successful application of free labor upon sea and land.

Brief addresses were made at the dinner table by Messrs, TRAIN, WASHBURN, BRASTOW, WILSON, MARVIN, of Florida, KNAPP, T. STARR KING, WHITE, of Lowell, and SANGER, of Dover. The next, on the 22d and 23d, was

THE BRISTOL COUNTY SOCIETY.

The attendance was large, and the objects of the exhibition realized. Dr. NATHAN DURFEE is its presiding officer. There was no regular Address, but at the dinner table remarks were made by Messrs. T. D. ELLIOT, CHARLES G. DAVIS, E. H. BRIGHAM, and others. The stock exhibited comprised about 150 head, mostly grade cattle, and a few South Down and Native Sheep. The exhibition was attended with the usual plowing, drawing, &c.

THE WORCESTER NORTH SOCIETY

held its Show at Fitchburg, on the 24th. The morning was drizzly and cool, but the plowing and drawing, and all things else went on with spirit and regularity. There were 304 head of cattle present, and among them many of excellent quality. There was also a fair show of horses, sheep, swine and poultry, and a fine pair of mules, who plowed and hauled a drag load of stones with decided ability. Dr. JABEZ FISHER, of Fitchburg, is the President. No regular address. At the dinner-table remarks were made by Messrs. BROWN, FLINT, BROOKS, BAILEY and TILDEN.

THE LEOMINSTER FARMERS' AND MECHANICS' ASSOCIATION

held its Seventh Annual Show at Leominster on the 22d, and as usual, they made a fine display; had a good display of stock, and over 700 dishes of apples among the fruit. Address by Rev. RUFUS P. STEBBINS, of Woburn, and a practical and interesting one too. The Leominster people are very energetic, and get up a show of more merit than those of some of the county societies.

The Horticultural Exhibition of the

ESSEX INSTITUTE

took place at Salem on Wednesday, 22d, and is said to be the best ever given by the Institute. They excel in fruits and flowers.

THE NEWTON HORTICULTURAL SOCIETY,

J. F. C. HYDE, President, had an exhibition on Tuesday and Wednesday, Sept. 21st and 22d, and made an excellent display of vegetables, fruits and flowers, and works of art. Upwards of 60 became members. It closed with a banquet in the evening.

THE GROTON FARMERS' CLUB

held their exhibition on the 24th; the weather was propitious, the attendance large, and most of the departments of the farm were well represented. Address by Rev. Mr. BABBIDGE, of Pepperell.

Our friends in New Hampshire have also been "mustering."

THE ROCKINGHAM COUNTY FAIR

held its Sixth Annual Exhibition at Exeter, on Wednesday. The display of stock was large; that of fruits, grains, corn, &c., not equal to former years, according to the reporters. Address, by Prof. J. G. HOYT, and as was expected, a capital one—he does nothing in a mediocre way. The town teams were very fine, and so were the girls that rode in the tastefully trimmed wagons that were drawn by the town teams. We are sorry to see that "*escort duty was performed by the Exeter Guards, numbering forty-one guns.*" Our mission is a peaceful one, we have no need of guns—the town teams, and the healthy girls in the wagons decorated with their own hands, was an escort a thousand times more appropriate and beautiful than as many guns as were lost at the siege of Sevastopol. Let the military reap

its glory on its own field, and firemen on theirs. It would be no more ridiculous for us to escort the military to a sham fight with hoes, scythes, pitchforks, mowing machines and potato-diggers, than for them to escort Pomona and Ceres to their festival halls with cocked hats and guns! We can only keep these exhibitions pure and useful by rejecting all meretricious display, and by confining them to the specific objects for which they were established.

THE CONNECTICUT RIVER VALLY FAIR

was held at Charlestown, on the 21st, 22d and 23d, and, we understand, was a decided success. HENRY HUBBARD, Esq., President. Hon. CALEB CUSHING was expected to deliver the Address, but was prevented in consequence of sickness. We have a spirited account of this Exhibition by a lady who was present, which we shall give next week.

THE MAINE STATE FAIR

commenced on the 21st, and was continued three days, at Augusta; the papers give glowing accounts of its inception and progress. Hon. JEFFERSON DAVIS, of Mississippi, gave the Address, which is also spoken of in high terms; the portions of it which we have seen we like. Some practices were introduced into the exhibition which will prove the entering wedges of its destruction if they are continued. We deprecate that course of management which seems to imply a doubt of success, unless other matters are introduced which are entirely foreign to the objects of the association. If we need riding schools, or any other useful accomplishment, let us have them in their own proper time and places, and let them stand or fall on their own merits, and not divert the attention of gathered multitudes from the legitimate object of an exhibition. It is a distrust of the power of those associations which may have a disastrous result, —it has already proved so in several instances.

BUTTER MAKING.

"Can we make more Butter by churning all the Milk than the Cream only?"

Most assuredly we can. Almost every one who has had experience in butter-making in hot weather knows that before the cream all rises the milk will be loppered, and sometimes it is found mouldy. How, in this case, are we to get all the butter that is in the milk, unless we churn milk, cream and all? One of my neighbors churns his milk and cream all together, and after the buttermilk has stood awhile he churns it over again, and finds enough butter in the buttermilk to supply his family with what they want to eat. If you could compel the cream to rise all up before the milk is loppered, you could then get nearly all the cream of the milk, so as to have the whole of the butter by churning the cream only.—A. L. SMITH, *in Genesee Farmer.*

For the New England Farmer.

LETTER FROM THE SANDWICH ISLANDS.

Honolulu, July 12, 1858.

JOEL NOURSE, ESQ.:—*Dear Sir,*—I find in the May number of your very valuable journal, some quotations from letters to my brother, which were not designed for publication, and were not written in a manner to give a correct idea of gardening or farming in this tropical land; a little explanation, then, may not be unacceptable.

First, in regard to the Chinese sugar cane seed; it came to hand in as fine condition as could be wished, and was very perfect seed. I planted all the ground I had to spare, about one-twentieth of an acre, on the 21st of May, 1857. It grew finely, and reached a height of 11 feet, on an average, and produced a heavy crop of seed. Before the seed was fully grown, I cut a part of the crop for my cow and horse, and weighed it for experiment; the yield was at the rate of 11½ tons to the acre, of green fodder; the second crop was larger, and the third crop was double the first. I cut six crops of fodder during the year, from the same planting, and seven crops on a part of the ground. I supposed I should have to dig it up on account of the exhaustion of the soil, but having manured the ground between the rows (it is planted in drills 3 feet apart), it still produces a good crop. I am now cutting the eighth crop, 15 months from planting. I have planted more since, as I think it the very best crop for green fodder that I ever saw.

In regard to the sugar cane of the Islands, it must not be supposed that "three tons of sugar to the acre" is an average crop, although that has been produced on some very rich spots. One and a half tons is a good average here, and two tons to the acre for a field is considered a remarkably fine crop. I wish I could send you a little of our A. 1, Island sugar; it is the finest I ever saw. It is of the *lightest straw color*, and every minute particle is a beautiful crystal. This sugar, when shipped to San Francisco this season, *netted* the owners 10½ cents per pound. Several new plantations have been commenced this year. A careful calculation made by two of our practical planters, based upon the experience of several years past, gives a net profit of about 33 per cent. on a capital of $40,000 to $50,000 invested in a well managed sugar plantation on these Islands. There are many good locations for plantations, but capital is wanting to develope the wealth of the soil.

My sweet potatoes, alluded to in your extracts, gave me over 40 barrels for a second crop, during the year, making 100 barrels, or 300 barrels to an acre for one year—about one-third of the vines remain for a third crop from the same planting, and are doing well. I have three varieties of the sweet potato, in separate patches, on a new piece of ground, which attract much attention on account of their luxuriant growth, and from examination of some hills, I anticipate a splendid crop.

I have two kinds of millet, now ripe, yielding very heavy crops—the Chinese and the Egyptian, so called here—the former a round, white seed, and the latter the shape of maize, and deep yel-

low color. Both are excellent feed for fowls. I can raise almost every kind of garden vegetable upon my ground: the greatest difficulty is in obtaining *good seed*. That which you sent me a year ago was the best I ever had, scarcely a single seed failed to germinate. Most of the seeds which we get from California are of the poorest quality, and almost as costly as the gold dug from their sands and rocks.

Finally, I must tell you that gardening and farming generally, at the Islands, are in rather a primitive state; it is but recently that much attention has been turned in that direction. The soils of different localities, with perhaps one or two exceptions, have never been analyzed, and it is hardly possible to *guess* what elements are wanting for our different plants and fruits. I have 30 or 40 fruit trees from California, mostly peaches, which grow well, but do not bear, the young fruit dropping soon after the blossom, while the peach from the seed bears well. What is the reason? The mango is a favorite fruit here, and it grows luxuriantly in rich, warm localities. Most tropical fruits, I doubt not, would do well here, and very many of the fruits and berries of the temperate zone, did we know how to cultivate them; as we have every variety of climate, from the torrid level of the sea to the region of frost and snow, upon our magnificent mountains. But let me not be further tedious to you. I wish I had time to write something worthy of a place in your excellent paper. which many of us read with great interest.

Very truly, J. FULLER.

For the New England Farmer.

"IS CHARCOAL LIABLE TO SPONTANEOUS COMBUSTION?"

MR. EDITOR:—I quote the caption of a paragraph in your paper of 18th inst., and in compliance with your general invitation for some one to investigate the matter, I give you the results of some experiments which I made many years ago, and communicated to the American Academy of Arts and Sciences, and to several other scientific associations.

The theory your article alludes to is probably incorrect, as to moisture setting charcoal on fire. That hypothesis is probably founded upon the idea, that charcoal made at a high temperature is liable to have particles of reduced potassium mingled with it, the potassium coming from the reduction of the potash of the wood.

Now it is a fact, that charcoal made at low temperatures is most liable to spontaneous combustion, or rather ignition at low temperatures. The red-brown charcoal, made from 300 to 600° Fahrenheit, is of this kind, and no reduction of potassium could take place at such temperatures. Indeed, it remains to be proved that metallic potassium exists in any charcoal.

The true theory of ignition of moist charcoal in drying is this. The cells of the coal are filled with water. Heat expels the water as vapor, and the air rushes in and oxygen is rapidly condensed, producing great heat, just as takes place in platinum sponge over the hydrogen jet. Even charcoal, that has not been wet, but has just been made and extinguished, is liable to re-ignite, since the extrication of the natural moisture of the wood, and the discharge of light carburetted hydrogen, leaves the cells empty, and air rushes in to supply the vacuum, and condensing gives out much heat. "A fragment of recently burned charcoal, of convenient size to be introduced under a small air-jar, over the mercurial cistern, will soon take up many times its own volume of air, as will appear by the rise of the mercury in the air-jar. In this case it absorbs more oxygen than nitrogen, the residual air having only eight per cent. of oxygen in it." ("Silliman's Principles of Chemistry, page 219. Phil. Ed., 1852.") The same author observes that recently prepared boxwood charcoal absorbs 9¼ times its own bulk of oxygen gas, and 1¼ times its bulk of nitrogen.

I have found that the light porous varieties of charcoal, which has been saturated with moisture, were very liable to take fire when dried, even at a temperature somewhat below that of boiling water, 212° Fahrenheit. The greater combustibility of these light spongy charcoals, is partly owing to their being poor conductors of heat, so that it is not readily dissipated by conduction, and hence the heat rapidly accumulates, as the oxygen condenses in the pores or cells.

Many years ago I made my first experiments on this subject, and have since frequently repeated them, or made observations confirming those I had before performed.

The first experiment was this: I took a piece of wet, porous charcoal from my laboratory cellar, and attempted to dry it on the top of a stove-drum, on which had stood and was still there, and at the temperature of the stove, a jar of water. The charcoal was laid close to the water-jar, and received no more heat than that. Soon as the charcoal became dry, it took fire, and yet the water was not boiling hot and had not boiled. The charcoal was so thoroughly on fire that it could not be extinguished by placing it on a cold marble table, but continued to burn until it was reduced to ashes. In this case, the oxygen of the air had penetrated into all the cells of the charcoal, and it was on fire all through.

The next experiment I made was in Bangor, Me., when giving some lectures on chemistry and geology.

I had occasion to render some gunpowder and pulverized charcoal very dry, and for this purpose spread the gunpowder on the top of a stove-drum, and placed a package of charcoal, done up tightly in a sheet of letter paper on the same stove, on top of the gunpowder. When I thought it dry enough, I took the paper package of charcoal from the stove, and placed it on a table; on opening the paper, a few minutes afterwards, I found all the charcoal had taken fire. The gunpowder still remained safely on the stove, and the pan of water on it was not boiling hot.

The first cited experiment I have thrice repeated with success, employing common pine charcoal, taken from my cellar.

Hence you see that the precautions taken by your manufacturing friend are well grounded and wise. It would be well if builders, carpenters and masons were more fully convinced of the readiness of wood and charcoal produced at low temperatures to take fire, for then they would be more careful in the arrangement of the woodwork near chimneys and stove-pipes, and would

take more precautions against the high temperature of air from small air-chambers to house-warming furnaces. Hot air will char wood, and will set cotton and linen cloth on fire, as readily almost as flame itself, if the temperature is allowed to run as high as it frequently does, in air from a small hot-air chamber. A large volume of moderately heated air is far safer and wholesomer than almost red-hot air from a furnace. Woodwork, near chimneys of old houses, is often found to be charred, and I have frequently seen it in the state of very combustible charcoal, on taking off old hearths. It seemed wonderful that the houses had not been burned. It is a mistake to suppose that a red heat is necessary to set wood on fire. Instances are known of shavings packed around a steam escape-pipe, being set on fire by the heat of steam under ordinary atmospheric pressure, viz., 212° Fahrenheit.

A drying-room in a chemical establishment was set on fire by air at 240° and in drying pigments.

A flouring mill was set on fire by the heat of a corn-drying kiln, at a temperature below 300° Fahrenheit, and lastly strips of painted carpet, packed in a barrel and placed in a garret, took fire at the ordinary temperature produced by the sun's rays, and turpentine chips placed in a barrel, in a yard to a drug store, took fire spontaneously. CHARLES T. JACKSON.

Boston, Sept. 8, 1858.

PASTURING IN THE HIGHWAYS.

The grass which grows in the road on which a man's land lies, is as much his as the fruit or shade trees standing there. All the public owns in the highway is the right of passing over it; and even the town authorities can take no more of the earth from it, or anything else, than is necessary for making the passages safe and convenient for travellers. Horses and cattle, therefore, that run at large and feed by the roadsides, are, in fact, just as much taking what belongs to the person over whose land the road runs, as a man is stealing his property who should cut down and cart off the apple trees or shade trees that stand in front of his house. But this is a small item in the objections that lie against pasturing in the highways. It obliges every man to be at the expense of maintaining a high, strong fence, which he ought not to be required to keep for the sake of making a "long pasture" for his neighbors. In France there are no fences on the roads. All the fences there on any farms, are those around the pasture grounds. So in some other European nations. Indeed, we know some of our own towns in Maine, where the citizens have voted not to allow cattle to run at large; and the law is so well observed, that whole farms go unfenced by the roadsides. This is a great saving, and one to which every farmer ought to be lawfully entitled. The law ought to be as good a protector of a man's rights as cedar posts or stone walls. Or if allowed to get their living for their horses, cattle, sheep and swine out of the highways, they are bound to keep a shepherd with them all the time, for really, in law, no man is obliged to keep a rod of fence between his cornfield and the road.

If one man may pasture his cows in the road, all have an equal right to do the same; and when droves of cattle are all the season roaming about the streets and public ways, they are not only oftentimes a nuisance in the way of entering open gates, and breaking down fences, but are sometimes dangerous to persons by their ill tempers and vicious habits. A man cannot always have watch of his gate or bars to see that they are every moment closed against the ingress of bold and breachy animals. The evils, therefore, to a patient and suffering public, from the too common practice of pasturing in the highways, are very great, and should be corrected either by the good sense of the community or by the force of law. Even the owners of such cattle themselves run a risk which more than overbalances what they gain by this theft upon the public—the risk of impounding fees, of bills of damage to the enclosures they enter, of straying away beyond recovery at night, of being stoned and maimed by vexed neighbors and unruly boys, and of being dogged by a maddened canine race. We had rather buy our milk at ten cents per quart, and our butter at fifty cents per pound, than to purchase and own a cow and take all the risks and censures of pasturing in in the highways.—*Rural Intelligencer.*

REMARKS.—Friend DREW has graphically depicted some of the evils growing out of turning stock loose into the highways,—but the greatest among them all he has not yet adverted to—and that is the great danger of misunderstandings, quarrels and litigation, growing out of the forays which cattle make upon property where they do not belong.

Every man is bound by principles of morality and kindness to be a good neighbor, and when he permits his horses, cattle, poultry, or dog, to endanger his property, or the persons of his family, he opens the way for harsh feelings, for quarrels, and perhaps for litigation which may be continued for several years, and which may end in such expenditures as to drive one or both from the possession of the farm! We have known such instances.

It is scarcely less than a crime, then, for a farmer to allow any of his stock to trespass upon the property of another. Accidents will occur, where stock will break a fence and get out, but these are exceptions, and even if they do considerable damage, the matter is easily overlooked.

We look upon that man as a bad neighbor, who permits his stock of any kind—and especially his dogs—to injure or give anxiety to those around him.

APPLES AS FOOD.

The working people in cities do not, as a general thing, regard apples as food, but merely as a luxury; this is especially the case with our foreign population. But apples are not estimated according to their real value as an article of food; they hold a low rank in the estimation of most persons in comparison with potatoes, so far

as it relates to their nutritive qualities, whereas the best qualities of apples are perhaps superior. In Cornwall, England, the peasantry consider ripe mellow apples superior to potatoes as food, and nearly equal to wheaten bread. In many parts of Europe the laboring people eat sliced apples with their daily bread, and make a hearty, healthy meal of them. The finest apples in the world are raised in the United States, and the working people in our cities would do well to use more of them for food, especially during the fall and winter seasons, when they can be obtained cheap. We hope yet to be able to eat apples during the midst of summer (at fair and reasonable prices,) as sweet in flavor and rich in nutriment as when plucked from the tree. Much attention is now directed to their perfect preservation during the summer's heat and winter's cold.

EXTRACTS AND REPLIES.

A LARGE CALF.

Mr. E. Johnson, of this place, has a heifer calf that is just eighteen weeks old, which weighs four hundred and fifty pounds. The calf is of the Devon breed, of a deep cherry red color, and well marked for a cow. Its weight, when four weeks old, was 196 pounds; when four months it weighed four hundred pounds. The girt of the calf now is four feet and six inches. The feed of the calf has consisted of the milk of one cow and what hay she would eat; no meal or any other grain having been given her.

Mr. Johnson is one of our most thorough farmers, and raises some good stock, as the above will testify. H. G. PALMER.

Lebanon, Conn., Sept. 14, 1858.

PLOWING OLD PASTURES.

Mr. EDITOR:—I wish to inquire through the columns of your paper, of Mr. Holbrook, if it will do to plow old pastures in August, and seed down, without fencing to keep the cattle from treading it up. Last year I tried a small piece of winter wheat and it yielded 25 bushels to the acre. I have now three acres which look well. Ought it to be fed down any? Would it be a good plan to roll it as soon as the snow is off in the spring? MAPLE.

East Hardwick, Vt., Sept. 7, 1858.

REPLY.

It will unquestionably work well to plow old pastures in August and the first half of September, and seed the land to grass, without fencing the cattle from it. Such has been my own practice, and that of other persons whose improvements of pasture lands I have observed. Some advantage would perhaps be gained by keeping the cattle off for one year after seeding anew, but by no means enough to pay the trouble and expense of fencing. After plowing the land as well as possible, harrow it thoroughly, and then sow the grass seeds thickly, covering them with simply a bush, or a heavy roller, the roller, however, being best, unless the land is moist and heavy. I should not feed down the winter wheat. If the land is stiff and compact, and liable to heave by freezing and thawing, then it would be well to roll it as soon as may be after the snow is off in the spring. But if it is a friable, sandy or loamy soil, rolling will not be necessary. Ten to twenty or more bushels of unleached ashes sown on each acre of the wheat next spring, will cause it to tiller out well from the root, improve the crop, and pay you well. If the land is to be stocked with grass seeds, the ashes will also insure a good catch of grass. F. HOLBROOK.

Sept. 20, 1858.

A PUMP FOR A DEEP WELL.

In a late *Farmer*, I notice a correspondent inquires for the best pump for a deep well. Having some experience with pumps, I will give "C. W." my opinion.

Having recently and quite thoroughly examined "*Jeffrey's Patent Ball Valve Pump*," I think I hazard nothing in saying that it has claims to preference over all others. It works easy and fast, is not liable to get out of order, and must be very durable. Moreover, it is in itself an efficient fire-engine, capable of throwing water rapidly on to the roofs of two-story buildings, by the aid of a few feet of hose. This latter consideration gives this pump very great importance, as by its adoption the risk of loss by fire is very much diminished.

Were I the owner of "C. W.'s" 32 feet well, I should not attempt to draw water with a chain-pump, if I could procure one of the above mentioned. E. INGHAM.

Springfield, Vt., Sept. 6.

SOWING BUCKTHORN SEED.

Will you inform me how the berries of the buckthorn are to be prepared for sowing, and when to be sowed, and oblige

Derry, N. H., 1858. A SUBSCRIBER.

REMARKS.—The following is Mr. J. F. C. HYDE'S plan, as communicated to us in 1853. See *Monthly Farmer* for 1853, page 226, for an interesting article on "Live Fences."

"I take my seed after it is washed free from the pulp, and mix it with sand and loam, about half of each, using enough to prevent the seed from heating; after having thus mixed them, put them into a tub or box, and place them away in the barn-cellar or some such place, looking out that the mice don't get at, or water run in, to rot them. In the spring, prepare the ground by first spreading on manure, then plow it well, that it may be well pulverized, after which strike a shallow furrow and manure again slightly in the drills, mixing it up with the soil, and then sow the seed as peas are sown, not too thick, for the plants will not grow so stout; this should be done as soon as the ground is dry enough to work well. It is unnecessary to say that they should be kept free from weeds."

A SPRAINED COLT.

Can any one tell me, through your paper, a remedy for a sprain caused by slipping on ice? The swelling lies on the fore foot, half way between the hoof and joint, rather uneven and somewhat callous. I shall try an oil made from angle worms, which is very powerful, and has

been known to remove callous bunches as hard as bone. I will report if successful in this case.

Hill, N. H., Sept., 1858. N. F. MORRILL.

NEW WAY OF PAYING A SUBSCRIPTION.

A correspondent of the Lagrange *Whig* gives the following amusing account of the way a farmer was taught how cheaply he could take the papers. The lesson is worth pondering by a good many men "we wot of."

"You have hens at home, of course. Well, I will send you my paper one year, for the proceeds of a single hen for one season; merely the proceeds. It seems trifling, preposterous, to imagine the products of a single hen will pay the subcription; perhaps it won't, but I make the offer."

"Done!" exclaimed Farmer B., "I agree to it," and appealed to me as a witness to the affair.

The farmer went off, apparently much elate with his conquest; the editor went on his way rejoicing.

Time rolled around, and the world revolved on its axis, and the sun moved in its orbit as it formerly did; the farmer received his paper regularly, and regaled himself with the information from it, and said "he was surprised at the progress of himself and family in general information."

Some time in the month of September, I happened up again in the office, when who should enter but our old friend, Farmer B.

"How do you do, Mr. B.?" said the editor, extending his hand, and his countenance lit up with a bland smile; take a chair, sir, and be seated; fine weather we have."

"Yes, sir, quite fine, indeed," he answered, and then a short silence ensued, during which our friend B. hitched his chair backward and forward, twirled his thumbs abstractedly, and spit profusely. Starting up quickly, he said, addressing the editor, "Mr. D., I have brought you the proceeds of that hen."

It was amusing to see the peculiar expression of the editor, as he followed the farmer down to the wagon. I could hardly keep my risibles down.

When at the wagon, the farmer commenced handing over to the editor the products of the hen, which, on being counted, amounted to eighteen pullets, worth a shilling each, and a number of dozen of eggs, making in the aggregate, at the least calculation, $2.50—more than the price of the paper.

"No need," said he, "of men not taking a family newspaper, and paying for it, too. I don't miss this from the roost, and yet I have paid for a year's subscription, and over. All folly, sir; there is no man but can take a newspaper; it's charity, you know, commences at home."

"But," resumed the editor, "I will pay for what is over the subscription. I did not intend this as a means of profit, but rather to convince you. I will pay for—"

"Not a bit of it, sir; a bargain is a bargain, and I am already paid, sir—doubly paid, sir. And whenever a neighbor makes the complaint I did, I will relate to him the hen story. Good-day, gentlemen."

HOW TO MANURE TREES IN GRASS LAND.

Very few persons manure trees growing in sod or grass land, in a judicious or economical manner. The general practice is to dig the manure in, within a diameter of six feet, having the body for the centre. The tree takes its food from the young rootlets, whose mouths extend just as far on every side, as the branches of the trees; hence, this manure applied close to the body of the tree, is not where the roots take it up; and, of course, but little of its value is absorbed by the tree. If you doubt it, just try the experiment on two trees. Serve the one as above named, and the other, as follows, viz:—Mark a circle around the tree, having for its outline the exact radius formed by the overhanging branches; dig on the inner side of this circle a trench two feet wide, and one foot deep; mix well-rotted manure half and half with the best of the soil, or the earth dug out of the trench, and fill the trench with it; then replace the turf, and wheel away the refuse, or extra earth; rake clean and smooth; you will have a good growth of tree; your fruit large and more fair, and no unsightly or unnatural hillock or mound around the body of the tree.

For the New England Farmer.

MOWING MACHINES BY OXEN.

MR. EDITOR:—I observed an inquiry in your paper of the 4th inst., whether "mowing machines can be worked with oxen; and if so, which machine operates in that way the best?"

I beg leave to reply—partly in confirmation of your own answer—that the use of oxen with these machines is, in some sections of the country, very common; though horses are generally preferred where they may be conveniently had. I have seen the Allen machine worked by oxen enough to convince me, that, with a well trained, stout pair, driven by a careful hand, the work may be performed quite as easily and successfully as with horses. It will, of course, require two persons to attend to the work, until the oxen have become accustomed to it; and it will always be most convenient to have a rider on the seat. But, after a little practice, a well trained pair of cattle would not require a driver, beside the rider; any more than they would, in plowing, require a driver beside the plowman.

Mowing machines are fast coming into use, where the land is free from rocks and much grass is to be cut. They are found to save labor and wages; and frequently, much risk of injury to the hay. Indeed, it is believed and asserted by many, that the mere saving of hay through the use of a machine, has been sufficient, in their case, to nearly or quite pay the expense of mowing.

Of the several kinds of mowing machines in use in this section, I know of none equal, in all respects, to Allen's, either for horses or oxen. And similar preference is given to it, I believe, in other places, where repeated and careful trials have been made to test its comparative merits with other machines. Great improvements have been made in all these machines, since the first use of them, and this of Allen's has been brought fully up to the highest measure of excellence yet

discovered. Undoubtedly, there are improvements yet to be made in all; and the inventor of this will be behind none in endeavoring to discover and adopt them. But, as the machine is now, no one need be deterred from using it, because he has only oxen to employ in drawing it. If they are well trained, and he is a careful driver, he will desire no better team, and be satisfied that his work is done more economically and better than it could have been by hand mowing.

Now that I am writing, let me suggest the inquiry, Mr. Editor, whether a special meeting of our County Agricultural Societies, for the purpose of testing the mowing and reaping by machinery and by hand labor, might not be profitable and desirable. Such meetings might be had in July, in suitable places, at a distance from the place of regular meetings, so as to accommodate those whose residence is so far from it, as to prevent them from doing so much for the Society as they would, and from sharing so largely in the benefits and pleasures of the annual show as they ought. At these special meetings, stock might be exhibited, and many articles brought out, which would otherwise seldom or never be taken to a distant Fair. I have always thought that such a meeting, in this county, would be largely attended, and be made highly useful and profitable; while it would serve, in a measure, to equalize the privileges of the agricultural society to those who join it in towns remote from the place of the annual show. S.

Medfield, Sept. 14.

For the New England Farmer.

CAUSE OF POTATO ROT.

FRIEND BROWN:—The pictorial illustration in your paper of this date would seem to indicate that you are in a measure carried away by the bugs—at least, so far as potatoes are concerned. The microscopic theories on this subject are so plausible, and so difficult to be met, by those who have not complete magnifying instruments at command, that it is almost useless to attempt a replication thereto.

After the expressed opinions of several of our most scientific observers, such as Dr. Harris, of Cambridge, and Dr. Fitch, of Albany, that "insects are not the cause of the potato rot," and their complete exposition of the several varieties of insects charged with being the cause, I thought no one would have the presumption again to introduce them. So it is, no theory is so visionary as not to find some followers; and when the leading columns of the most reliable agricultural journals in our land, are caving in, it is time to look about and see on what foundations our own notions are based.

It has been repeatedly averred, and not contradicted to my knowledge, that the blight upon the potato has made its appearance on the same day,—aye, even on the same part of the day, over a wide extent of territory, covering many towns and even counties. If this be so, it would seem to be brought about by some influence more pervading, than a fly on the leaf, or the gathering of little worms at the base of the vines.* I allude to these because in times past my attention was called to them as *the real operating cause of the rot.* Now, it seems, the cause is found in the development of eggs laid upon the potato when growing, in like manner as the germ whence springs the canker worm is deposited and cemented in the limb of the tree by the grub that precedes it. Whence comes the insect that deposits the egg, or how it finds its way to the potato, is not explained. But if it be true that a little deeper covering of the earth will save the potato harmless, this is indeed a fortunate circumstance; possibly, only those tubers which grow near the surface will be found impregnated with the poison. I have always found those potatoes, which, before they were dug, had been exposed to the sun and air, so as to become discolored, to be of doubtful value. But it never occurred to me to think that they had been haunted by insects.

You well remark that the opinion is general, that the potato rot is caused by atmospheric influences. It is sound philosophy, when we find a sufficient cause to seek no further. Perhaps you will ask me how comes this cause in the atmosphere? If you should, I must act the Yankee so far as to answer your question by asking another,—how came the lightning there? When you answer my inquiry, I will answer yours.

Sept. 18, 1858. J. W. PROCTOR.

* I remember that an eminent manufacturer rode all the way from the banks of the Merrimac, to show me these groups of insects; and because I did not at once acquiesce in a demonstration so palpable, he pronounced me anything but a wise man. I believe this same gentleman continues strong in the faith, that he has discovered *the cause.* If so, your own county of Middlesex will have the glory. Do you know what has become of the $10,000 offer made by the State? Has it run out? or is it still available to those who may desire it?

REMARKS.—The opinions of our intelligent correspondent are entitled to respect. But his mere opinions, without much investigation, are not entitled to so much regard as the opinions of those who have made this particular subject a matter of study and investigation for several years. The potato is not more seriously affected than the apple, yet nobody imputes the defect in the latter to the atmosphere. Why cannot careful investigation detect an insect in the potato, if he is there, as well as in the apple or plum?

For the New England Farmer

WINTER AND SPRING WHEAT.

FRIEND BROWN:—We noticed a communication in the Monthly *Farmer* for the present month, from Henry Poor, of N. Y., on winter wheat, wherein he expresses a hope to hear from those farmers who have not only asked for their "daily bread," but have been doers in the work of raising it. For the benefit of any New England farmer who might, by our experience, be induced to sow wheat, and for the satisfaction of *one* who we think advocates one of the best interests of New England farmers, we venture to make the following statements, viz.:—That we have raised winter wheat on our farm almost every year for the last ten or twelve years, and found it as sure, and quite as profitable a crop, as any we have raised. The average yield per acre, with us, has been about 25 bushels.

In 1855 we purchased some seed wheat in

Boston, which came labelled to us, White Blue Stem; sowed one acre, from which we harvested in 1856, 32 bushels of white wheat, weighing 62½ pounds per bushel! Sowed two acres from the seed thus obtained from our own raising, which, owing to the severity of the winter, was very much injured on about two-thirds of the field; however, we obtained 28 bushels of good plump grain, (14 bushels to the acre) the smallest crop, by the way, for the past seven years. Sowed one acre last year, which gave us this season 31 bushels, which weighs 63 pounds to the bushel. Before purchasing the variety above named, we sowed the common white wheat. In 1853 we harvested from two acres 65 bushels, which weighed 62½ pounds to the bushel. We sow the last of 8th month, (August,) or 1st of 9th month, and have the best success on mowing swards. We think the soil of New England lacks none of the vegetable elements to produce wheat, and hope to see more interest felt by New England farmers in wheat culture.

Last spring we sowed for the first time, by way of experiment, three-quarters of an acre of spring wheat of two varieties, viz.:—bearded and bald. From one-half an acre of the former, 9 bushels; from one-quarter of an acre of the latter, 5½ bushels. Thus it will be seen that the bald yielded the most per acre, notwithstanding the grain of the bearded is the largest. Quite as good a crop as oats, and no more trouble to raise it. When winter wheat appears to be killed by an unfavorable winter, we think it will be good economy to sow spring wheat to make up the deficiency, and thus raise our own bread. We sowed 1½ acres last of last month, from which we look forward with as much confidence in expectation of a good crop, as from corn, rye or potatoes.

BETTY AND ALDRICH.

Blackstone, Mass., 9th mo., 25th, 1858.

For the New England Farmer.

ELECTRICITY.

MR. EDITOR:—I saw in the *New England Farmer* of August 21, an article by "P." headed "Electrical Phenomena," stating that barns filled with new mown hay are more liable to be struck by lightning than others, and asking the reason. Thinking I may assist your correspondent, I venture to offer the following.

There are two kinds of electricity, named positive and negative, which attract each other and repel themselves; that is, a thing which is charged or affected by positive, will attract a thing which is charged by negative, and will repel one that is charged by positive, and *vice versa.* The clouds are charged by one of these kinds, and when they come near a conductor they induce, or excite, the opposite kind in that conductor, and then the two opposite kinds endeavor to run together and form an equilibrium.

Therefore, suppose that a cloud is charged with positive electricity, and it comes near to a barn, it will induce the negative in that barn, and, if near enough, will strike it, and the heat generated by the passage of the fluid through the air, will produce a flash, and perhaps set the barn on fire.

Electricity naturally seeks the best conductors, and will strike them quicker than poor ones, and water being a conductor, new hay, which is moist, will be a better conductor than old hay, which is dryer; therefore, a barn filled with new hay, being a better conductor than one filled with old, will be more liable to be struck. C. A. S.

Spring Grove, August 31st, 1858.

EXTRACTS AND REPLIES.

CURE FOR RING BONE.

I noticed in your truly valuable paper of the 25th inst., an article of inquiry from Mr. N. F. Morrill, of Hill, N. H., in regard to a colt that had got sprained between the hoof and joint—and in giving my opinion in regard to it, would say, that angle-worm oil will not prove efficacious in removing or preventing ring-bone, and the only thing that will, is something to stop the leakage in the sprained part, and thus prevent nature's continuing to form bone to stop the leakage; and it being in a difficult place to bandage, the only remedy I have ever known to be successful, is a very heavy leaden ring to be worn in such a manner as to continually press upon the sprained joint and keep the leakage closed.

I have never known a case where this has proved unsuccessful, when taken in season—and perhaps on a young horse, where the bone has commenced forming, angle-worm oil, in connection with the leaden ring, may remove ring-bone and effect a permanent cure. S. A. WALKER.

A ROCK LIFTER.

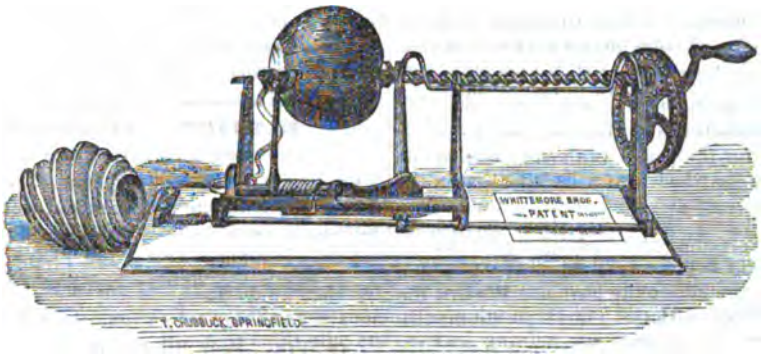
In your September number I have observed an account by Mr. Brown of "a machine for lifting rocks," as though it were something new. There has been one of this same construction and manufacture in use at the State Farm at Westborough for three years past, and one on the farm of Mr. R. S. Fay, at Lynn, for the same period. I have used one for eight years, until I have exhausted its field of labor, and they are quite common in Bristol and Plymouth counties. Their is no doubt of their great value in getting large stones out of the surface, and in placing them in line as base stones for walls, and there has been some effort made to introduce them into use. To show this, I have called your attention to those which have been for some time in your immediate vicinity. I. S. F.

Woods' Hole, Mass., Sept., 1858.

REMARKS.—At the time of writing the description of the Rock Lifter which we saw in operation at Rochester, we were well acquainted with the one on the State Farm at Westboro', and were aware of the fact that Mr. Fay had one at Lynn. But the machine at Rochester, though acting on the same principle, is essentially different in construction. One great difference is, that it has but two wheels—the others have four. Both are very useful machines.

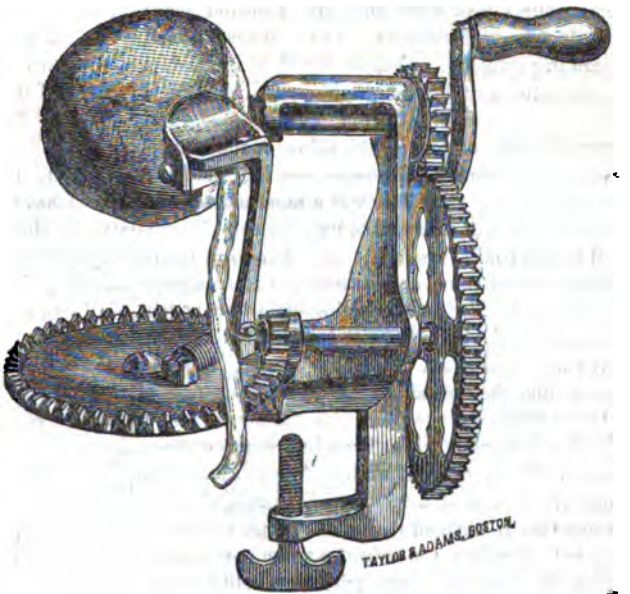
ROCKY MOUNTAIN POTATOES.

Mr. E. PAGE, of this place, planted last year two potatoes of the above seed which yielded one-fourth of a bushel, one of which weighed 1¾ pounds. This year he planted the one-fourth



APPLE PARING MACHINES.

The above engraving represents one of *Whittemore & Brothers'* patent apple-paring machines. Five revolutions of the crank *pares, cores* and *slices* the apple in the neatest manner. The figure at the left hand corner of the engraving shows the apple sliced. Taking the whole operation of preparing the apple for the pan, there is probably no machine which performs the work with so much certainty and facility.



TURN-TABLE PARING MACHINE.

This machine is on an entirely new principle. It has no SNAPPING OR REVERSE motion; is made entirely of iron and not liable to get out of order, being simple in its construction. After the apple is pared the knife is carried round by means of the *Turn-Table*, to the rear side of the apple, thereby giving no obstruction to removing or replacing the apple; it then passes under the fork arbor, to commence paring, as seen in

bushel and raised 7½ bushels; 1 bushel of them, 82 in number, weighed 65 pounds. M.

Canaan, N. H., Sept. 15, 1858.

—

QUESTIONS AND ANSWERS.

What time of the year is best to spread clay on sandy land, and on grass ground?

How much fowl-meadow grass seed ought to be sown on an acre of low land that has been plowed, and what time of year is the best to sow it? Where can it be bought, and about what price? Is this spear that I enclose the genuine kind?

Will it pay to sow the seed on grass land and not do anything else to it?

I send you, also, a leaf of a young tree that I found on my farm. Can you tell what kind of a tree it is?

Will potatoes that are cut, one eye to a piece when planted, get ripe as early as larger ones?

I think that potatoes are not so good that are cut very small, because they do not set so early, therefore do not get so ripe.

GEORGE ESTES.

North Berwick, Me., 1858.

REMARKS.—Haul out clay in the autumn, and drop it on sandy land, or on grass land; and the winter frosts will enable you to spread it in the following spring. If hauled on to grass land early in the autumn, it should not be left in heaps.

2. We learn, upon inquiry, that a bushel of fowl-meadow grass seed is not too much for an acre. Sow in August, early in September, or in April or May. There is but little seed in the market, and it is quite high—as much as $3 to $4 a bushel. The spear you sent is the true fowl-meadow.

3. Cannot tell by the leaf sent what tree it came from.

4. Cannot tell about the potatoes.

the cut, which is done by 2½ revolutions of the crank.

One great advantage of this machine is that it pares crooked or uneven places nearly as well as the smooth surfaces, and at the same time does the work with wonderful rapidity. This machine is manufactured by Messrs. *Lockley & Howland*, Leominster, Mass. Both are excellent labor-saving-machines.

MIDDLESEX AGRICULTURAL SOCIETY.

This Society held its *sixty-fifth* anniversary at Concord, on the 29th of Sept. The weather was favorable, which, with the liberal premiums that had been offered, and the *drawing* power of the orator of the day, brought together an unusual collection of people. Fifteen teams plowed, and the Spading Match took place as usual.

The show of stock was large, and embraced some fine cattle of all breeds common among us, and there were about fifty horses of all kinds. The swine and poultry were well represented. Twenty-five loaves of bread and fifteen samples of butter were tempting articles, especially to those who had taken an early breakfast and travelled twenty miles to reach the grounds. The display of fruits, including apples, pears, peaches and grapes, was very fine, and received many words of commendation. The vegetables, also, were in profusion, and most excellent in kind.

In articles of household manufacture, and in some specimens of painting and the arts, there was a good display. Of other manufactures there were stoves, sifters, a mowing machine, soaps, &c. &c. The sifter was a most convenient, portable article, made to fit into the top of a barrel to sift coal ashes, and in another form to sift beans or sort them, or chestnuts, or to sort potatoes at will. It is a cheap, durable and excellent economist, devised and made by Mr. SANFORD ADAMS, of Boston. Persons burning coal for their fuel, cannot afford to do without one of these sifters.

The *Mowing Machine* is an improvement upon the old Ketchum, and we feel free to say, comes nearer our idea of a good article than any we had before seen. We saw it put together and set in operation within ten minutes after it was taken from the wagon; it was tried in a field of thick rowen, which it cut clean and rapidly, and without much strain upon the horse. It could be turned at the corners or backed with ease. It cuts a swath about four feet wide, and weighs less than 300 pounds. If this machine proves to work as well as when we saw it, there must be a large demand for it another year. It was made by Messrs. *Nourse, Mason & Co.*, who are determined, we believe, to furnish the farmer with just such a machine as he needs before they are done with it. We saw nothing in all this excellent exhibition, that gave us more pleasure than this new machine.

At half past one, every plate at the dinner table was occupied, and many more plates were wanted. Mr. Sheriff KEYES, the President, welcomed the company in brief words, saying that he would not detain them long from the rich harvests before them. The dinner over, he introduced Mr. EMERSON, of Concord, who gave an Address occupying nearly an hour in the delivery. Its subject was,—*The condition of the farmer—his strength and weakness, his aids, and his share in the great future before the people of the country.* It is utterly impossible for us to give such a synopsis of this address as would be fair to the speaker, or one that would give a correct idea of it. We prefer, therefore, to give such portions of it by-and-bye, unmutilated, as we can find space for.

Several "regular" toasts were then read, and were pleasantly responded to by Messrs. WHITE, of Lowell, Judge MARSTON, of Barnstable, the Delegate from the State Board of Agriculture, Dr. C. T. JACKSON, of Boston, Hon. JOSEPH HOWE, of Halifax, N. S., JOSEPH T. BUCKINGHAM and E. P. WHIPPLE, of Boston, and Hon. C. L. KNAPP, of Lowell.

The Society then re-elected all its old officers, and a new Board of Trustees for the ensuing year, and then adjourned.

In this Exhibition, we noticed that each department was distinct, and that when any change in the exercises occurred, it was done at the moment assigned. The arrangement of the Show was in the hands of Capt. JOHN B. MOORE, as Superintendent, and his skill and vigilance put all things in order and kept them so. The large Hall was tastefully ornamented with fabrics from the carpet mills of AMORY MAYNARD, Esq., of Stowe, their bright colors illuminating and setting off the gifts of Ceres and Pomona below them. We have no doubt that many a good housewife concluded that she *would* have a new carpet this winter.

In point of merit, taking this Exhibition as a whole, Preparations, Stock, Implements, Fruits, Vegetables, Manufactures, Order, Punctuality, Oration and Addresses, we think we have never seen it surpassed—and our experience in these matters has not been limited. All these excellent points have been gained by two things:—*First, by well-directed labor, and secondly, by endeavoring to keep the Exhibition confined to the objects for which it was designed.* In speaking of the Middlesex Society, one of our contemporaries says:—

"One marked feature of its management has been the discarding of all outside 'attractions' to

draw crowds. Its 'trotting course' is hardly six hundred feet around, and horses are made to take their true and proper position in the exhibition. It has encouraged no fast trotting, no equestrian exercises by ladies, no balloon ascensions, but has pursued a straightforward, steady course, encouraging only what was legitimately connected with agriculture. The natural consequence of all this has been the getting up of superior exhibitions."

It is true, that such has been the general fact, and we regret to learn of this old and honored among the honorable associations of this kind, that after the Committee of Arrangements had fixed a price, amounting to a prohibition, of admittance of peddlers, auctioneers, mountebanks and gamblers, to their grounds, that wise restriction was re-considered, and all these classes were admitted. The effect of this was, to occupy room needed for the proper purposes of the Exhibition, and distract the attention of visitors from its worthy objects to those of a useless, if not of an absolutely vicious character. We saw hundreds hanging about a brawling razor or cotton whip seller, or the peddler of brass gewgaws, called jewelry. In another instance, we saw for two hours, a group of fifty men and boys either engaged in a low species of gambling or looking upon its changes; while, in passing three or four times by the pens containing many specimens of the most beautiful cattle, we did not see half that number of persons looking at them. It will not do to say that persons will take their choice in these matters, or that if hawkers and peddlers are not admitted *on the grounds* they will plant themselves near and draw the people away. In the first place, the Society should present no choice by introducing matter foreign to the objects of the incorporation, and in the next, if such persons plant themselves near enough to become an annoyance, let the power of the law be executed to remove them. When the legislature granted acts of incorporation to these associations, it did not leave them unprotected and their objects liable to be defeated by the rabble, but extended over them the panoply of its power in the form of law, which is amply sufficient to guard all their rights.

We have looked upon the Old Middlesex Society as a wise and noble pioneer in all that relates to the art of husbandry. We have long felt proud of her men and her products, and have often quoted her arrangements and examples in perpetuating what has now become one of the leading institutions of the Commonwealth. We trust she will purge herself of every error, and lead the way in the future as she has in the past, with that calm, clear light, which will allure, but not mislead.

We omit the premiums, as they are of a local character, and would occupy room which ought to be devoted to the general reader. They will all be given a little later in the publication of the Society. The premiums of the South Middlesex Society were admitted last week during our absence.

For the New England Farmer.

LETTER FROM CONCORD, MASS.

Correspondents—Mowing Machines—Extra Flour—Hydraulic Rams.

MR. BROWN:—Every Saturday evening your clean, handsome, entertaining, instructive paper comes to my door. Let me assure you, sir, that it always finds a hearty welcome. You are fortunate in your able coadjutors. I know that this Mr. Holbrook must be a good farmer. His communications are very calm and instructive. I never read many articles before I find what the *judge* has contributed, when I see his familiar name.

I have thought a good while of writing to you. I was greatly exercised in hay-time about your neighbor Buckminster. Why, he did publish some extraordinary articles about Mowing Machines. Whether other sections were like situated or not I don't know, but in our part of the town his subscribers were using and applauding the work of the very machines their paper of progress unqualifiedly condemned! Mowing Machines are doubtless susceptible of great improvements yet, but it is idle to cry them down, indiscriminately, and try to show how much better it is to let the horses kick away at flies in the barn all the forenoon, and human sinews do their work.

It has always seemed to me that an agricultural paper should lead on the farming community in the direction of true progress, and not be among the last to acknowledge the merits of great inventions.

Has it ever occurred to you that the flour men were rapidly using up the English language? If you were to order a peck of fine peaches or plums, or of your tailor a fine coat, no doubt you would receive of each most worthy specimens. But with flour, the word "fine" is wholly obsolete. The very sourest, blackest, heaviest, mustiest, buggiest, is stamped "superfine!" As you go up the scale you find "Extra Family;" a tolerable article; makes very fair hot biscuit. Then some original marker puts on two x's (XX.) That was double extra. But another more ambitious has a stencil which prints three! And lately I have seen four x's put on to delude the ignorant. To be sure, the inspector pays little heed to the paint on the head of the barrel. He looks at the flour within, and sometimes there is quite a want of consistency in the manufacturer's opir ion and that of the disinterested inspector.

I hope that you will find an opportunity soon to call and see the operation of a Hydraulic Ram which I have set up lately. It is a complete machine. It is very simple. Mine is set below a fall of about four feet, and is nearly a thousand feet from the barn, where a copious stream is discharged, very much to the relief of the animals, as well as the men who had served faithfully at the pump-handle. Then I have a pretty fountain supplied by the same source, which is a con-

stant delight to the children of the whole neighborhood. I think so well of the ram that I should be glad to give you a full article on the subject.

There is not the slightest difficulty in any of your readers having water in abundance, if in the vicinity of their barns they have brooks or springs from which a sufficient supply can be obtained to fill an inch and a half driving pipe, with a two feet fall. W. D. B.

Concord, Mass., Sept. 21, 1858.

REMARKS.—The article which you would be "glad to write," ten thousand readers will be glad to read—so write it as fast as you can, and send it along.

For the New England Farmer.

CONNECTICUT RIVER VALLEY FAIR.

BY MRS. A. E. PORTER, SPRINGFIELD, VT.

MESSRS. EDITORS:—You will probably have an official account of the Connecticut Valley Fair, held this week, across the river from here, in Charlestown, N. H.; but I have collected a few little waifs which a regular reporter may not have noticed. Sometimes a few fresh mosses and wayside blossoms are welcomed, even though richer bouquets and cultivated flowers are in sight.

The counties on both sides of the river in New Hampshire and Vermont are represented at this Fair, and in all the region, beautiful though it is, perhaps no pleasanter spot could have been chosen than Charlestown.

But as I heard the whistle of the cars, which were hourly bringing men, women, children, horses, oxen, cows and sheep, and saw the long trains of country wagons loaded with sturdy farmers with their wives and children, I wondered how many of these thought of the fact that less than a hundred years ago, this spot was considered an advanced frontier military post, cautiously guarded from the savages, and that the gay multitude passed on near the spot where the Indians took a whole household captive to Canada, and burned the buildings of the settlers. For a long time this fort was occupied by a garrison, and more than one bloody skirmish was witnessed there. "Number Four," as Charlestown was called for many years, was well known in the annals of Indian warfare. No wonder the Indians gave up reluctantly the rich and fertile meadows which bound this town, one of two hundred and the other of five hundred acres. The village itself is very beautifully located, its long, wide street shaded by a row of elms on one side and a row of maples on the other. On the north, a short distance from the village, are the Fair Grounds, a park of thirty acres, a noble, level piece of land, lacking nothing but a few shade trees to make it perfect as a gathering place for the multitude. The race course is half a mile in circuit, and very smooth and hard. There are seats for two thousand persons. Everything is very plain, but convenient and substantial.

When I arrived, the cattle-pens, coops and Mechanics' Hall, were pretty well filled, and Floral Hall was filling with homespun blankets, "good, thick and warm," fancy bed-quilts, where one is puzzled to decide upon the comparative merits of shells, stars, vase-work or tulip-shaped, wrought rugs, worsted rugs, rag rugs and rag carpeting, fine and soft as one could desire. These, with cheeses that looked creamy and rich, and butter yellow and sweet, were the work of Vermont and New Hampshire matrons, for I observed "Mrs." attached to most of them. Some nice oil paintings, embroidery, hair-work, wax flowers, pasted flowers, &c., attested the taste of the young ladies. Never mind, Mr. Editor, the long faces of croaking men who tell how their mothers wove and spun, and fancy that young ladies of the present day will make worthless wives; they are mistaken—for there are no better wives the world over than these same Yankee girls; and the dainty hands that now color these flowers and weave so lovingly the vines and fancy work of scarf and collar, will be just as proud of nice bread, sweet butter and good coffee, when they find a husband values them most. A love of the beautiful never disqualifies a woman for the useful, for as she grows older she will learn the true beauty of use.

I found in the Mechanics' Hall quite a collection from our little village, and as I hope some day, Mr. Editor, to see you here making a personal acquaintance with your subscribers, I will introduce you to a few. Here is Mr. WATKINS, with a table of surgical instruments, made with great neatness and skill. Here are legs and arms, fingers and hands, for those who need, almost as good, and the manufacturers seem to think a little better, than those endowed with nerves that are sensitive to pain. Next is Mr. FULLAM, with a set of stencil tools for marking, and here at the adjoining table is something new for the ladies; "Loveland's Scissor Sharpener," quite a useful and pretty invention—can be kept in a lady's work-basket and used by herself without aid from the noisy scissor grinder. Mr. LOVELAND, the gentlemanly inventor, yields his seat that I may rest awhile and examine his invention, which is well worthy of notice, and will no doubt receive the patronage of the ladies. Here is RANDALL'S Cheese Press and INGHAM'S Fanning Mill and Separator, in which beans and grain arrange themselves with almost military precision, according to size, while all dust and rubbish is obliged to leave in haste. Our ingenious mechanics, PARKS & WOOLSON, had a new Suction and Force Pump, well worth examination.

I was sorry to observe among the vegetables, only the largest kind; enormous squashes that look as if made for antedeluvian monsters, long radishes and beets that seem fit for nothing but to commence an artesian well. We seem to be a great while in learning that the largest are the coarsest and generally unfit for table. The smaller kinds are choicer and more concentrated. Little things are not to be despised.

"Ask why God made the gem so small,
And why so large the granite,
Because He meant that man should set
A higher value on it."

As to potatoes, I was happy to learn that the potato known with you as the Eastport, here as the Blodgett, is ranked the best. It tallies with our own personal experience, rich, mealy and well-flavored, not yielding largely, but without the rot, on light soils.

I passed on, having a desire to see some of the fine stock for which this region is noted; but

some gentlemen (?) look a little askance when a lady turns to the pig pen, the ox stall or the sheep cote, and one said, not to us, "A fair is no place for women."

One lot of noble merino sheep attracted our attention, and even our unpractised eyes could discern their merits. A gentleman who appeared by his conversation to be the owner stood near. He welcomed us cordially, and was happy to know that three ladies felt interest enough in his noble pets to examine them. One by one he brought them to us, showed us the breadth of chest and back, thickness and fineness of the wool. He had in all fifty-one Spanish merino sheep, and among them some of which Vermont may well be proud. We were pleased to see his interest and love to the animals. He gave us his name as Mr. WHEAT, of Putney, Vt., and "Ladies," said he, "allow me to introduce to you some fine thorough-bred cattle from our village," and he had taken from their stalls and ranged before us five fine specimens of Durhams, large, fat, sleek, and that looked as if their owner had an eye to nice roasts and fat steaks. There were some of the mixed breeds that were fine animals, and not far from here in the stalls, some pretty Devons, also some Cotswold long wool, mutton sheep. To this gentleman we were indebted also for an introduction to the "Flying Morgan," a pleasure well worth the day's time. I never realized before the beauty of this noble creature, in shape, color and motion. Graceful and swift as a bird, but gentle as a fawn, we patted his glossy coat, we stood by his side and gazed at those sightless eyes, till we felt a sympathy for his misfortune, strong as if he were human, like ourselves. He lost his eyesight, we were told, through the carelessness of a groom and the unskilfulness with which an operation was performed. There he stood, strong and supple in every limb, grace in every curve, but stone blind. Nevertheless he was gentle and patient; his great affliction had not soured his temper or lessened his activity. We turned away with a tear in our eye and a gentler feeling in our heart towards all God's creatures. This noble animal had taught us a lesson of patience and gentleness which we will be long in forgetting.

Mr. Wheat was a stranger to us, but we wish his example might be imitated at our Fairs, and perhaps ladies will feel more interest in farming pursuits, if they could have a few such pleasant lessons yearly.

I was exceedingly disappointed in not hearing Mr. Cushing, and his absence was a great disappointment to thousands. No substitute was appointed, and horse trotting occupied the time. This formed altogether too prominent a feature of the exhibition, and I regretted that thousands of people should come together without one hour for the whole three days given to moral or mental improvement. Ought this so to be?

Yours truly, A. E. P.

Springfield, Vt.

WHO IS A FARMER?—Some persons seem to think that to become a practical farmer, one must necessarily possess a rough, filthy exterior. That some excellent farmers are rough, unpolished, and occasionally filthy in their persons, is true, but it is not the want of good breeding, nor the appearance of filth, that constitutes the ability to become a good farmer. Is it not rather the possession of an intimate knowledge of the facts and principles involved in the art of agriculture, and a sound judgment to exercise them to a good end?—*Working Farmer.*

For the New England Farmer.

CROPS IN WINDSOR COUNTY, VERMONT.

The farmer in the south part of Windsor county, Vermont, has good reason to rejoice in an abundant harvest for what he has sown and cultivated this season. The hay crop is full an average in quantity, of good quality, and well secured. Corn is now, the 20th of Sept., untouched by frost, and, in my judgment, a better crop than we have had for some years past, save one. The late planted pieces here have matured very fast for the last ten days—a part of mine is now standing in the stook, and the remainder has been topped. The potato crop now promises to surpass former crops in yield and soundness. Rye and oats are good.

Wheat is but little sown in this vicinity, not more than one farmer in ten who makes the attempt but pays out his money for the labor of his brother farmer in the West. This year I sowed five pecks of wheat, from which I raised twelve bushels of nice wheat, full and plump berry. The ground selected was the spring previous broke from the sward, manured in the rough furrow, harrowed in and planted with corn; at the time of first hoeing. I applied wood ashes to each hill, say about a gill. I received a good crop of corn. This spring I drew on to the poorest places some of my finest manure, spread and turned under with a furrow about eight inches deep, then harrowed smoothly, breaking and pulverizing the soil so that the grain will be covered more readily and evenly than when sown on the furrow, as some farmers do. I then sowed my wheat as I took it from the granary, dry—harrowed it in thoroughly, covering the seed deeper than my neighbors do theirs; light covering is a mistake, as I think the grain should be deep covered enough to prevent the drought from affecting its roots during June and the forepart of July, and will draw more nourishment from the ground than when the kernel is left near the surface of the ground. When the wheat was well up, I sowed (in a moist day) broadcast, wood ashes, about twelve bushels to the acre. I am of the opinion that winter sown would be preferable, sow as soon as the first of September in this locality. Apples, in this immediate vicinity, are a failure. The curculio did its work thoroughly last spring, and is fast increasing its ravages in our orchards and so likewise the army worm.

Fall feed is very good—but the decline of one-fourth in the prices of our horses, and one-third in neat stock, makes us feel that it is hard times. Yet farming is *the* business to be sought after, to make us healthy, honorable and happy. It furnishes the most inviting employment for our children, it brings with its seasons its change of work and golden harvests, which is not the case with the mechanic and manufacturer. F.

Chester, Vt., Sept. 20, 1858.

For the New England Farmer.

CROPS, FARMING, &c., IN WISCONSIN.

MR. EDITOR:—Our wheat and oat crops are pretty much threshed out. The wheat, so far as I have heard, ranges from 3 to 14 bushels per acre. I think the average cannot go above 6 or 7 bushels to the acre, and that of inferior quality. Oats are very poor, generally yielding 10 to 15 bushels per acre. In portions of Illinois it is still worse. In large sections, along the Illinois River, and elsewhere in that State, the oats were not generally harvested at all, and the wheat hardly worth the trouble and expense of harvesting. The corn crop is likely to turn out fair, both here and in Illinois. If Jack Frost keeps his distance a little longer, we are safe for corn, as much is already beyond danger. Our potato crop is lighter than usual for this country, so there will be a very light surplus of grain and provisions this year to spare from this country, but there is enough for man and beast until time for another crop to grow, when, through the goodness of Providence, a more abundant crop may crown our labors.

I have never been in any part of New England, having been raised in South Western Pennsylvania, where I lived until three years ago. I came to Wisconsin to make my fortune quick; left a pleasant home in the good old East, hoping soon to better my condition in the great and growing West. Here I am in a fertile part of the country, working hard and making but little more than a living, deprived of many comforts I enjoyed East, among which are, sometimes, very bad roads, poor buildings and the loss of fruit; I speak of those like myself, whose means were small. Men with means can situate themselves pleasantly enough near the large towns and villages of the West. Money will do that in any State in the Union, and what I fear most here, in regard to fruit, is that they never can raise it successfully in this prairie country. The prospect is very poor at this time—perhaps more attention would lead to more success; it is evidently too much neglected here. The soil is as good in its virgin state as any reasonable man could ask, and lays as handsomely, but that tells the story most in its favor now. It is no hard matter to see any amount of slovenly farming in this country. There are exceptions, of course, but a large portion of farmers waste enough grain annually, in harvesting and threshing, to keep a good sized, economical eastern family. There are but few farmers as far West as this, that have fencing enough done to be able to pasture their stubble grounds until after corn gathering, which is hardly ever done before December. Very few have farms and out-buildings to take in their grain, so it is stacked on the ground where it grew, threshed out and the straw burned on the ground, as a general thing, as few have stock enough to consume their straw, so they are exhausting their improved lands more and more, every year, by this practice, and the crops are already, in many places, telling the tale of always taking off the land, never putting on. I can show fields, and even whole farms, that have seen their best days, until something more is done for them in the way of fertilizing.

A large class of Wisconsin farmers are much in debt and likely to remain so. The prosperous times enjoyed here, the last few years preceding the present one, seemed to have spoiled as many as it benefited. Never thinking a change of times might speedily limit their resources, they plunged in debt to enlarge their farms and possessions, took railroad stocks, for which many mortgaged their lands, and are now squirming to get out of debt, but it seems the more they squirm, the more they don't get out.

This is a great grain-growing country; the large crops that are gathered, of a favorable season, in the West, are truly tempting to the man who earns his living by the sweat of his brow, and thousands have done well by coming West. But, after having lived and farmed in the West nearly three years, and travelled in different sections of the country, I prefer an eastern home for our own domestic comfort, and think now, it wont be long until the *N. E. Farmer* will find its way to our own little rocky farm, that we left unsold in the east. We think by taking out the stumps and rocks it will look smoother, and by raising plenty of nice fruit it will be sweeter than ever. As I said before, I was never in New England, but I like the name, the enterprise of its people; I like to read its journals, for when I open one I am sure to find something useful. As the budding place of our best institutions, may her example never be less appreciated.

T. A. JACKSON.

Broadhead, Wis., Sept. 9th, 1858.

FARMERS' FESTIVALS.

NORFOLK AGRICULTURAL SOCIETY.

Norfolk county is favored with men of means and skill, who take a decided interest in whatever relates to the farm. Under their influence, the Norfolk County Agricultural Society came into the world full grown, and started off in her first exhibition with a vigor rarely gained by others in many years. It was not our pleasure to attend the last show, on the 29th ultimo, and we can only judge of it by the reports which we find in the papers; that they had a pleasant, social time, and that there were many things to commend in it, there can be no doubt. But, whether in all respects, the managers have taken the best course to subserve the cause in which they are engaged, there is considerable doubt, judging from the report before us. The report says:

"The agricultural productions on exhibition, though not extensive, were highly creditable, and embraced nearly everything raised by the farmers of the county."

"The mechanical department was rather limi ted."

"In the upper hall, the *fairest* of the *Fair* officiated at tables ladened with tempting baits, to be secured by adventurers in scramble-bags, and innocent little lotteries;" * * "and from the *throng here all day*, * * a round sum must have been realized to the society."

"There were a few fine horses and some milch cows with 'good points.' The number of work-

ing oxen was small. The Durhams were found wanting. The Drawing Match had a *fair* company to witness it, and a fair crowd witnessed the Spading Match. No premium was offered for trotting, but a match was gotten up between two well-matched horses, just to fill up the time." There was also "a game of base ball announced in the programme of the day."

Such are the expressions of the reporters; the reader cannot fail to see that the *animus* is not in a description of the products of the farm, but that he found larger crouds, more excitement and apparent interest in matters having no connection with the farm. We notice these things, not because we find pleasure in such criticisms, but to call attention more directly to the results of any departure from the true objects of such an association; and to inquire whether others than the farmer are not gradually taking the control of them into their hands.

Address by JOHN S. ELDRIDGE, Esq., of Canton; subject: "*National Industry the True Source of National Wealth*," and is spoken of as a fine production. Mr. GRINNELL, of the State Board of Agriculture, happily responded to a sentiment complimentary to the Board. In closing his congratulatory address, Mr. President WILDER "urged the true interests of agriculture upon the farmers embraced in the Society, and pictured glowing results of continued improvements." No man better knows the wants of the farmer, or will do more to supply them, than he.

THE PLYMOUTH COUNTY SHOW

was held on the 28th and 29th at Bridgewater. We regret that we were not able to attend it as a delegate from the State Board of Agriculture, as we had been appointed, in consequence of their making a change and bringing their Show on the same day as that in our own county. In *fruits and vegetables* the show was very good, so was the display of *household work*. In the Plowing Match 14 team were engaged; there were but 78 head of horned cattle in the pens. But a noble spectacle was presented in the *Town Teams*, numbering 228 pairs of oxen!

"To please the multitude a foot race was announced at 3 o'clock."

CHARLES G. DAVIS, Esq., was re-elected President, and a "grand ball and supper" concluded the exercises of the first day.

THE ESSEX COUNTY SHOW

occurred at Danvers, Sept, 29 and 30. The weather was fine, and a large number of people attended.

Neat cattle.—In this department 179 animals were exhibited, classified as follows:

Fat cattle, 7; pure blooded bulls, 15; mixed blooded bulls, 13; pure blooded cows, 9, (principally Alderney;) mixed blooded and native cows, 35; heifers, 40; calves, 8; working oxen, 40; steers, 12.

The neat stock comprised a much larger number of pure blooded animals than any previous exhibition of the Essex Society.

Horses.—There were 90 horses, classified as follows:

Stallions, 12; brood mares with foal by side, 21; draft horses, 20; colts, 37.

In this department there was a fine representation of blood, prominent for its excellence.

Sheep.—There were two entries of sheep, numbering about fifty, South Down and Native. They exhibited no very noticeable points.

Swine.—This department was unusually rich. More than half a dozen wagons were loaded with pigs of all ages.

Fowls.—There were twenty-five coops of fowls.

Agricultural Implements, &c.—In a large tent near the cattle pens was a display of improved agricultural implements, carriages, &c. Contrasted with the former was a plow, pitchforks and other implements, evidently a century old. Their bungling manufacture and unwieldy size attracted a good deal of notice.

The Exhibition at Granite Hall was very fine. The walls were decorated with pictures, flowers, needle-work, &c., agreeably and tastefully combined. The centre of the hall was occupied with several long tables, which were literally covered with the finest specimens of the productions of the orchards of Essex county. Finer apples or pears have not blessed the vision of any one. Essex county herself has never done better.

Of butter there were twenty-seven entries, or twice the number of any preceding year. Of cheese there were seven entries. All the specimens of dairy product were excellent.

The usual trial of working and draft horses took place. Twenty-seven teams were entered for plowing. Address by Dr. GEORGE B. LORING.

A correspondent says,—"this show was pronounced by all to be the best ever witnessed in this county. It was full in every department. One gentleman of great discrimination remarked, if there had been a premium for a *bad animal*, there would have been none found worthy of the award. The show of fruits and vegetable products was superb. One cultivator presented 88 varieties of vegetables grown under his own care. But what charmed me most was the intellectual treat at the table from EVERETT, LORING, POOLE, and others."

THE SALISBURY AGRICULTURAL AND HORTICULTURAL ASSOCIATION

had a show at Amesbury, on Tuesday, Sept. 28th, for the first time. They exhibited 30 cows, 10

pairs of working oxen, several fine horses, and a fine display of sheep and fowls. The exhibition of fruits comprised upwards of one thousand plates. Address by Rev. WILLIAM SPAULDING, of Newburyport. Ode, by JOHN G. WHITTIER, which we shall publish. They dined together and had speeches at the dinner-table. The President is Dr. J. B. GALE. In New Hampshire,

THE CHESHIRE COUNTY AGRICULTURAL SOCIETY held a show at Keene, Sept. 28th and 29th,—with fine weather, field entries larger than usual, working oxen of a higher grade, horses numerous, and the display in the Hall of the artistic skill of the citizens and the products of the gardens and fields, all of a high order. The *Sentinel* says:—

"The address of Judge French, on Tuesday evening, was superlatively good, well received by all classes, and all the criticism we have heard is that "it was too short—he ought to have spoken three hours." But the Judge considered himself limited as to time, as there was a concert at the Town Hall to commence at eight o'clock. But short as was the address, the Judge has made himself conspicuous in the estimation of the farmers of Cheshire county, many of whom were surprised to learn that a lawyer and Judge could be a first class farmer."

ALL WEATHER GOOD.

The following happy allusion to the weather was made by Edward Everett, in his recent speech at Binghampton, N. Y., which was delivered in a rain storm:

Sir, to speak more seriously, I should be ashamed of myself if it required any premeditation, any forethought, to pour out the simple and honest effusions of the heart on an occasion so interesting as this. A good occasion, sir; a good day, sir, notwithstanding its commencement. I have heard from one friend and another this morning—kind enough to pay his respects to me, knowing on what errand I had come—I have heard from one and another the remark that he was sorry that we hadn't a good day. It was, it is true, raining in the morning. But it is a good day, notwithstanding the rain. The weather is good; all weather is good; sunshine is good; rain is good. Not good weather, sir? Ask the farmer into whose grains and roots there yet remains some of its moisture, to be driven by to-morrow's sun. Ask the boatman, who is waiting for his raft to go over the rapids. Ask the dairyman and grazier if the rain, even at this season, is not good. Ask the lover of nature if it is not good weather when it rains. Sir, one may see in Europe artificial water works, cascades constructed by the skill of man at enormous expense—at Chatsworth, at Hesse Cassel, and the remains of magnificent water-works at Marly, where Louis XIV. lavished uncounted millions of gold, and thus, according to some writers, laid the foundation of those depletions of the treasury which brought on the French Revolution. The traveller thinks it a great thing to see these artificial water works, where a little water is pumped up by creaking machinery, or a panting steam engine, to be scattered in frothy spray; and do we talk of its not being a good day when God's great engine is exhibited to us, His imperial water works sending up the mists and vapors to the clouds, to be rained dowr again in comfort and beauty and plenty upor grateful and thirsty man? Sir, as a mere gratification of the taste, I know nothing in nature more sublime, more beautiful than these, descending in abundance and salubrity from the skies. (Applause.)

For the New England Farmer.

RAMBLES AMONG ROCKS.

For the first time in my life I have found what a rocky region there is in the little State of Rhode Island. I have often seen the rough rocks on the shores of Narraganset Bay piled up at Mount Hope, and "all along shore," and heard many a hint that clam-chowders were common even at this long date after the downfall of King Philip; but never until a few days gone by have I rambled over the rough roads of this little member of our Federal family.

On this beautiful morning, September 27, when the Sabbath was altogether past, and just as the frost and dew were being sipped up and stolen away by the stealthy king of day, I went out among the meadows, and through the woody wilds, and on to the highest hills, to spy out the shamming or the successful, among the efforts of the farmers.

Rockland Village has its name from, (I know not what,) its rocks, I suppose. There are "a few more left," after a host of them have been fashioned into factory walls, and other buildings. Here and there I found a piece of pretty good corn, standing where the floods would not be likely to wash it away, if corn and Christians alike by digging deep and laying a foundation upon a rock shall securely stand.

The soil of this neighborhood, when you can find it outside of a rocky prison-house, is of an excellent quality to raise good potatoes.

It seems a matter of astonishment to me that so little attention should have been given to the culture of various kinds of fruit. The soil is suited to the rapid growth of wood, and the apple, pear, peach, &c., would be quite sure to make a good report of themselves. Grapes might be grown in almost any quantity, if properly attended to.

Great mischiefs must ever follow so great neglect of agricultural interests as is apparent near many of our manufacturing villages. If the people become dependent, in families, upon "the mills," and have no retreat for themselves, their condition must be that of vassalage. Moral and social degradation will be quite sure to follow upon those families which become a mere appendage of some factory. When the homes of the people cease to be surrounded by well tilled grounds, then those families will sink into serfdom. But while the factories of New England can be chiefly supplied with laborers from the families of farmers, who know the pleasures of rural life, and the joy of life that is where the bright flowers bloom in summer and the songs of

health and hilarity ring out in winter, it will continue to be New England. But when the little farms of the snug farmers of a happy era have been lost in the wild waste of a neglected husbandry, and the multitude huddle into the little villages, and despise farming, it will be Old England then, with the objectionable features of that land of starving workers and uneducated children.

Complain as men may of the sterility of the soil of New England, it is the soil to be honored and cultivated, and the soil to boast of, so long as it bears an intelligent, industrious and virtuous people; but the land to be ashamed of, when it shall cease to present its "little farms well tilled," and its countless homes of intelligent and fearless farmers. C.

Rockland, R. I., 1858.

CONNECTICUT RIVER VALLEY FAIR.

In another column, the reader may find an account of the late Cattle Show and Exhibition of the Association with the above title. It was written by Mrs. A. E. PORTER, of Springfield, Vt.,—gives a delightful picture of the scene presented, and is made attractive by many graceful and appropriate touches, which our poor pen would have failed to impart had we been present.

We are under greater obligations to Mrs. PORTER for the noble example to her sex, in attending a Farmer's Festival and inspecting objects which *ought to be interesting to every body*, than we are for the excellent account she has sent us. What sort of associations has the biped been actomed to who said, "a Fair is no place for women!" Has not woman a common interest with man in everything the soil produces to eat, drink or wear? Is it indelicate for her to look upon the products of our fields and stalls, or to manifest an interest in matters of the highest importance to the family? In England, the wives of the landlords and tenants, too, "ladies to the manor born," mingle freely in all the affairs of the farm, and are nearly as well acquainted with the breeds of stock, loss and gain, fields, crops, draining, &c. &c., as the landlord himself. It is one of the leading causes why the occupation of agriculture does not take a higher stand, that women have not been more interested in it. Women sustain everything that is good, have a more just appreciation of the useful and beautiful, than men, and by their influences keep them from sinking into utter barbarism.

HOW TO EXAMINE WELLS.—A method of examining wells to ascertain whether they contain anything offensive has been recommended as being simple and yet efficient:

"Place a common mirror over the well in such a position as to catch and throw the rays of the sun to the bottom of the well, which will be immediately illuminated in such a manner, that the smallest pebbles, &c., at the bottom can be distinctly discerned, as if in the hand. The sun is in the best situation to be reflected in the morning or afternoon of the day."

ASHES.

There appears at present to be but one opinion among practical men in relation to ashes when applied as a stimulant to the soil, and that is, that they are of great value. This is indeed abundantly demonstrated by science, and no one familiar with the developments of chemical science, or with the obvious practical results produced by the ashes of vegetables, will, for a moment doubt their value as an application to most soils and crops. All vegetables, without a single exception, produce ashes upon incineration, or burning. These ashes, however, differ in their chemical constitution as well as in quality; and there are differences in the composition of the ashes produced by the several parts, or members of the same plant. To demonstrate this fact, the able chemist, DE SAUSURE, instituted a set of very elaborate experiments upon the wheat plant, straw and grain, and found the result to be as follows:

100 *parts of ashes contain*—	*Of wheat straw.*	*Of wheat grain.*
Carbonate of Potass	12.5	25.
Phosphate of potass	5.	32.
Hydrochlorate of potass	3.	0.16.
Sulphate of potass	2.	
Earthy phosphates	6.2.	44.50
Earthy carbonates	1.	
Silica (sand)	61.5	0.50.
Metalic oxides, (iron)	1.	0.25.
Loss	7.8	7.59

All of these ingredients, both of the straw and grain, are derived exclusively from the soil—from terrene elements, and in order to render lands fruitful in producing this crop, they must, where they do not exist naturally, and in sufficient quantity, be artificially supplied. They are the inorganic constituents of plants.

If we burn *humus*, or the residuum of vegetables left after putrefaction, we shall find that many of the non-volatile, inorganic constituents of the vegetable structure remain in the ashes, for putrefaction is a sort of combustion, and so far as the question under consideration is involved, produces nearly identical results. The ashes of wood and bark abound in these constituents, and therefore are possessed of a specific and easily ascertained value as a stimulant of vegetable life. Every farmer must have witnessed the highly beneficial effects which they produce on corn, beans, and the cereal grains, as well as upon grass lands, and especially upon pastures—upon turnips, cabbages, onions and other esculent vegetables.

They are also possessed of a very high value as an ingredient in compost; tending, by their alkalescent action, to promote decay, and the neutralization of acids in the mass to which they are applied.

INDECOMPOSABLE ELEMENTS.

So far as regards that particular portion of the soil which successfully resists the decomposition and the action of fire, the elaborate experiments of *De Saussure* and *Schroeder* demonstrate, that it exerts a merely nominal influence over the development and perfection of the vegetable system; and that, in fact, it merely contributes to it by furnishing a necessary principle to the mechanical medium which is requisite to secure a firm position or hold upon the soil, and affording a depository or sort of chemical laboratory for the preparation of the food which ensures to them sustenance and life.

All vegetables, of whatever character, size or development—from the most worthless to the most valuable—from the most insignificant and minute to the most majestic—derive the aliment requisite for their systems from *humus*, or the decomposing substances of animals and plants. Now if the crops produced by the soil of a certain field be regularly harvested and conveyed away, it is certain that such a course will, in a few years, tend to impoverish that soil. Every crop abstracts a certain specific amount of alimentary matter which it formerly contained, and which must be kept up in order to secure good and remunerating crops, as the soil possesses no recuperating powers, and as no vegetable can generate a single element of which it is composed. That all vegetables, and more especially the *culmifera*, or broad-leaved tribe of plants, do actually imbibe a certain definite portion of their pabulum from the atmosphere, is a point in relation to which there has long since ceased to be any dispute; but with reference to a greatly preponderating majority of our most valuable staple productions, this supply is inadequate to the sustenance of crops, and in most instances would be found too limited even to sustain life. As a general axiom, therefore, the perfection and volume of a crop may be regarded as depending upon the amount of succulent properties and nutritive juices extant in the soil. The *humus*, which is the product of decomposition, or the visible result of putrefaction, is the only known source of these "succulent properties" and "nutritive juices," and can be supplied in no other known way than by the application of those substances—in the form of manures—which are directly derived from the vegetable kingdom.

In applying *lime*, it is well known that there must be in the soil some organic substance for it to feed or act upon, in order to render its action perceptible, for though it may neutralize certain noxious acids (which it converts into manure) and effect a kindly modification of the physical texture of the soil, it can never supply the place of putrescent manure, nor furnish the aliment of plants where no decomposable animal or vegetable matter exists. To render lands fertile, we must supply the elements which compose the organized structure of the plant or plants we are desirous of producing.

It is plain, therefore, of how much importance is the *muck* or *humus*, of our extensive and accessible swamps, especially when it has been mingled with the droppings of stock, and has arrested their liquids and gases. We cannot well refrain from again urging its importance upon our people, as the true source from whence to fertilize and once more make glad their impoverished and almost barren fields.

CONSTIPATION.

There is no single word in Webster's Unabridged Dictionary, from aam to zythum inclusive, which, to our mind is so expressive of human misery and physiological depravity as this. It is mainly because our bowels are constipated that the people of these United States support twenty-five thousand drug-shops and forty-five thousand doctors at an annual expense of more than a hundred millions of dollars. And it is because of this that our people pay the quacks of the irregular trade several millions a year.

But the loss of the money expended in attempts to make the bowels of the community move, and in endeavors to obviate the consequences of their obstruction, is an insignificant evil compared with the loss of health and happiness and life. The mischiefs which spring from constipation, as the parent source, are as numerous in the vital domain as are the sins which, in the moral world, originate from the evil one himself. If Satan is the father of lies, constipation, is the mother of infirmities.

Where, in all this broad land, is there a man, woman or child whose bowels move naturally, who never requires artificial aids? There are a few such. And they are those who know almost nothing of sickness. They are strangers to dyspepsia, rheumatism, toothache, bronchitis, consumption. They never have the cholera. They are proof against yellow fever. They are secure from paralysis. They never die of apoplexy. Organic affections of the heart never trouble them.

Constipation of the bowels causes foul blood and morbid secretions. These occasion corrupt humors, which induce torpid livers, congested kidneys, oppressed lungs, and congested brains. Then follow rheumatic pains, headache, palpitation of the heart, vertigo, sinking spells, nervous debility, lumbago, sciatica, spinal irritation, piles, spasms, colics, and, as more remote consequences still, putrid fevers, pestilential epidemics, malignant erysipelas, carbuncles and cancers. And the medicines which are given to cure these consequences are worse than the diseases which they cure.

Learned physicians look for the causes of these prevalent maladies in the vicissitudes of the weather; in thermometrical variations; in barometrical states; in prevailing winds; in fogs; in storms from the east; in currents from the south; in tornadoes from the west; in blasts

from the north; in commotions in the heavens above; in convulsions in the earth beneath; in ozone; in electricity; in animalcules; in excess of nitrogen; in deficiency of nitrogen; in some fault of hydrogen; in carbonaceous miasms; in a want of carbon; in catching cold; in getting hot; in exposure; in confinement; in everything except—constipation.

And why is the whole human race, with few exceptions, sick and dying of constipation? The complaint is scarcely known in the animal kingdom below man. Why should the most intelligent creature in existence be the only one who cannot have a healthful action of the bowels? Surely there must be a cause. We charge the whole of it to the prevalent system of cookery—worse in some families, and hotels, and nations, than in others, but bad, ruinous, killing, all over the area of civilization. The remedy is not in the direction of drug-shops and doctors, but in that of food and cooks.—*Life Illustrated.*

For the New England Farmer.

LETTER FROM JUDGE FRENCH.

A Look at the Cattle Show, and at Agriculture in Cheshire County, New Hampshire.

Keene, N. H., Oct. 2, 1858.

My Dear Brown:—A pretty careful examination of what was done and seen at the Annual Exhibition of the Cheshire County Agricultural Society, here at Keene, last Tuesday and Wednesday, with some rides about the county, and many talks with the farmers during the past fortnight, give me some impressions of the state of agriculture hereabouts.

The Show was held at the grounds owned by the society, about a mile and a half from the central part of this town. They have a permanent enclosure, well fenced, containing twenty-six acres, upon which they have this year erected an exhibition hall 100 ft. by 30, with double floor, well shingled roof, and suitable tables and other fixtures for the display and protection of the fruits, vegetables, implements and fancy articles. This hall cost about $1000. The officers of the society had faith enough to borrow $1500 to complete their grounds and buildings to their satisfaction, and the result of their exhibition this year financially, has been that they have received about $500 more than all expenses and premiums, which reduces the debt one-third. Our county societies receive no aid from the State, and it requires the energy of such men as T. H. Leverett, of Keene, the treasurer of the society, who seems to possess the faculty of being in several places at the same time, and doing several things at once, to keep the treasury full.

The show-ground is arranged with permanent cattle-pens, and with a half mile circular horse-course. On the whole, although I have a great partiality for old Rockingham, it may as well be confessed, that Cheshire county leads the State, just now, in the prosperity of its agricultural society. And now we will look about the grounds, and talk of what we see, and what is thereby suggested touching agriculture.

CATTLE.

The working cattle of this county are equal to any in the world. Many of them are used for lumbering, in which business heavy cattle are required, and here they are. There is in them a manifest cross of Short-Horn blood, which gives them great size. One yoke, six years old, were said to weigh 4,500 pounds, and many yokes averaged 3,800 pounds a yoke.

They adopted a cruel, and not very satisfactory mode of testing the strength of working cattle and horses. They had drags loaded with stones weighing several tons, and the cattle were made to exert their whole strength in attempting to draw this dead weight through the sand. In such trials, much depends upon the work in which the cattle have been used, and much upon their being accustomed to society, many of them being frightened at the people around them. A trial in a cart reasonably loaded, where the training of the cattle could be fairly shown, would seem far better.

The plowing match took place at a field more than half a mile from the grounds, and attracted very little attention, not a hundred people being present. Ten ox-teams, each of a single yoke, and two horse-teams, competed.

The plowing was as good as is usual at county shows in this State. I think plowing is performed worse, by farmers in New England generally, than any other process in agriculture. The land here was easy and smooth, but the furrows were not drawn straight, and the work was not well finished up. The cattle were well trained, but the plowmen were not, and indeed, the standard of good plowing was evidently not very high. Most of the plows were of Boston make, but generally made to carry larger work than they are intended for.

I noticed very few Devons in the pens. In Rockingham we think well of the Devons for work, and in Sullivan county, they are bred considerably, and if we must try to breed a race for work and the dairy both combined, I know of no breed better adapted to our short pastures.

There was a very fair show of Alderneys or Jerseys. At the agricultural shows in England these cattle are called "Channel Islands Cattle." They come from the small islands in the English Channel, and it would prevent confusion, were we to adopt this general name, instead of the several names of the islands.

Since the show, I have been to Swansey to see the stock of Paul F. Aldrich, the principal exhibitor of this breed. He has four full blood

bulls, and one imported cow, and among his one hundred and forty head of cattle, a considerable number of half bloods. It is dangerous to express opinions about these matters, because the breeders are very sensitive, and ready to do battle for their favorite stock.

One point, however, is settled, if anything is, that the cows of this breed give richer milk than any others. Mr. Aldrich showed us the milk of his cow, and its color was as different from that of his other cows, as gold from silver. It is well understood in England, that the cream of one Jersey cow will manifestly improve the butter of a dairy of half a dozen others. The breed is peculiarly adapted to the wants of families in the country who know the difference between cream and skim milk. For milkmen about cities, a larger kind of cows, that will give a greater quantity of milk that does not require so much watering, is perhaps preferable.

A couple of Oldenburg calves, recently imported by Dr. Hatch, of Keene, from Germany, attracted a good deal of attention.

SHEEP.

Spanish merinos seem to be the leading breed in the county. Some pens were marked "Irish Smut," and some were of various grades.

Why cannot we introduce more fully some of the large English breeds of sheep for mutton? The improved Lincolns, which grow to the size of yearling colts, almost, and seem to be hardy, and yield about nine pounds of wool at a clip, could not fail to be profitable in New England. The farmers all agree that sheep are more profitable now than cattle, and that a sure source of income is in the sale of lambs for the shambles.

Not being a sheep man, I will not be too sure on this point, for I may have had the wool pulled over my eyes, but my belief is, that the best husbandry for the Granite hills, just now, is in sheep raising, for the meat in the first place, and the wool as an incident.

Of the Horses and Swine and Poultry, I have not room to say much. The horses shown were principally trotting horses for carriages, a kind of horse of which the Morgans are perhaps the best in the world. For this breed, the Connecticut River Valley Society, whose Exhibition I attended last year at Bradford, Vt., probably beats all New England. We shall soon want a heavy breed of draft horses, to take the place of oxen, as our farms become smoother, and the Suffolk Punch, from Suffolk county, in England, seems to me to be the model horse for the plow and the cart. Their usual weight is more than fifteen hundred pounds, and they are proverbial for their docility.

FRUIT.

The show of apples, pears, grapes and peaches was good. The hill farms in this county produce very fair and high colored apples. The Fameuse and the Canada Red, which are not much known in the east part of our State, thrive to perfection here. The Northern Spy is beginning to bear, and the fruit is very large and perfect, and the tree hardy, though not yet fully tested.

The culture of apples, on the hills of New Hampshire, is a sure and profitable business, in the neighborhood of railroads. In the valleys and on plains, we have many difficulties to contend with in the cultivation of fruit, of which our more elevated brethren know nothing.

The crops this year in this county are good. An early frost injured them in low places, but not elsewhere, and the corn crop generally is good. Potatoes are not rotting, and yield the largest crop known for years. Wheat is grown in fair crops and of good quality here. The season has been much dryer here than on the eastern side of the State, where we have reckoned it one of the wettest of seasons.

It ought, perhaps, to be named that on Tuesday evening, an agricultural address was delivered by a judge who was holding a court here, to a very full audience, at Dr. Barstow's church. It was said to be as good as could be expected of a gentleman of the profession of the law. Having used up my paper, I remain your friend,

H. F. FRENCH.

For the New England Farmer

THE BEAUTY OF A FARM IS A GOOD ORCHARD.

MR. EDITOR:—Here in old Cheshire county, N. H., we have some fine orchards, which shows that we have some good farmers, for every good farmer will devote a portion of his time to the cultivation of fruit. In my orchard, there was a full bloom, and the apples set well, but nearly all have been destroyed by the sting of some insect. Even those that remain on the trees are very imperfect; there will be a very little fruit in this section. Yet the failure of fruit this season should not discourage us; but let us hope on and hope ever. Every farmer should strive to study the cause of the blight, and if possible, guard against it in future. There is no doubt but that health, comfort, sociability, temperance, and good morals, generally, would be promoted, by making a choice fruit garden near our dwelling. But look around here in New England. How much more might be done by raising fruit, the apple especially. Some will say the crop is precarious, trees bear only once in two years! In a good collection, however, there is always a supply of some fruit or other, even in the most adverse seasons; meanwhile the non-bearing trees are gathering strength.

How often we hear people say, It is not worth while, for I may move away or rent, and in either case I should not get paid for my trouble! Now this is all wrong; supposing our fathers had acted on this selfish principle?

It is true, every kind of fruit is affected more or less by insects and diseases, and none flourish without care and culture; in fact, everything that is necessary for our existence we must pay a price for. Our trees suffer occasionally from the bark louse on the branches, and from woolly and green lice on the top, which check the growth. Caterpillars and blight, the borer and canker worm, are all to be contended against. But the cultivator himself is often much more destructive than any of these insects, by allowing his cattle to brouse the leaves from young trees, or trimming them himself at the season of growth, and also by cutting off the branches after they become large, and by cutting off the roots with the plow.

Roxbury, N. H., Aug. 5, 1858. G. W. N.

For the New England Farmer.

LITTLE THINGS:

Or, A Walk in My Garden....No. 17.

While gathering a plum tree a few days ago, my mind run on a subject somewhat foreign to gardening, but as the subject is one of importance, I have jotted down my thoughts on

POPULAR ERRORS IN MEDICINE.

There are some prevalent ideas among even intelligent people in regard to the medical and domestic treatment necessary in sickness. One of them is in the treatment of measles. If the patient does not break out well, or even if he does, recourse is usually had to hot stimulating teas for the purpose of driving them out. Now in this disease there is a strong tendency to congestion of the lungs, thereby bringing on a cough. Irreparable injury may thus be done to the lungs by such treatment. Far better to make use of milder teas, nearly lukewarm.

In cases of typhoid fever many persons are afraid of the patient's catching cold. Hence every avenue to pure air is closed, and the disease aggravated. Watch the time when the patient is hot and dry to ventilate the room, not when in a state of perspiration.

Popular opinion has long favored the idea that there is a specific remedy for every disease, but medical knowledge has as yet advanced but a little way in this direction. I hardly know of more than one complete specific, and that is sulphur. It will positively kill a troublesome little insect that burrows in the skin, thereby producing a troublesome disease.

The anxiety of friends for fear that a patient will starve during a fever is all groundless. Many a patient has been killed by giving food at such times.

Many persons suppose that new rum, balm of Gilead buds steeped in rum, camphor, or something else, inserted into a fresh cut will promote its healing. I once heard of a man who thrust into a bad cut a quid of tobacco for the same purpose. Nothing will heal a fresh cut more quickly than bringing the parts together and not allowing them to be disturbed.

People often talk of cutting short a fever and curing the erysipelas immediately by the application of some favorite article, but the truth is, the latter disease will have its run for about seven or eight days in spite of all applications. The most that can be done is to modify its rage, and render the patient as comfortable as we can.

Very many persons of a strongly marked bilious temperament often complain of dizziness and headache, not knowing that it is caused by the use of strong coffee. This is especially true of persons of sedentary habits. Hence they use all sorts of bitters before breakfast and then counteract them by a couple dishes of their favorite beverage. I love coffee dearly, but do know that it injures multitudes in this climate who are not ignorant of the cause.

Many people err in their judgment of what the physician should do in a case of typhoid fever. If the physician is not at work on his patient at every visit, he is doing nothing. Never was a greater mistake. The greatest care of the physician is to watch for symptoms, and when they appear, to combat them the best he can. Managing a fever is much like steering a ship. Rocks must be avoided, sometimes by steering to the right, sometimes to the left; then again the pilot has nothing to do for a time but to steer straight ahead. Just so with a fever. It is usually the case that during a fever there is a period when no marked symptoms appear, and the physician can let well enough alone, but it is unfortunately the case, that anxious friends are over anxious to have something done, though they do not know what. Let the fever sail on until there is a special call for interference, and then the physician can the better manage his patient to a favorable termination of the disease.

Many people err in the notion that it is not best to put on additional clothing as soon as the weather becomes cooler in autumn, because, as they reason, they will need it more in colder weather. This is a great mistake. Put on clothing just as soon as you feel the want of it. You may avoid a severe cold or a fever.

Many people attribute three-quarters the complaints of children to worms, but the truth is, it is but seldom that children have worms; at least, so numerous as to be of any account. Extremely ignorant people and quacks always find in imagination an abundance of worms.

But fearing lest I may not please the doctors, I will stop. N. T. T.

Bethel, Me., Sept. 25, 1858.

OUT-DOOR SAFETY.

The fear of the weather has sent multitudes to the grave, who otherwise might have lived in health many years longer. The fierce north wind and the furious snow-storm kill comparatively few, while hot winter rooms and crisping summer suns have countless hecatombs of human victims to attest their power. Except the localities where miasma prevails, and that only in warm weather, out door life is the healthiest and happiest, from the tropics to the poles. The general fact speaks for itself, that persons who are out of doors most, take cold least. In some parts of our country nearly one-half of the adult deaths are from diseases of the air passages, these affections arise from taking cold in some way or another; and surely the reader will take some interest in an ailment through which, by at least one chance out of four, his own life may be lost. All colds arise from one of two causes: 1st, by getting cool too

quick after exercise, either as to the whole body or any part of it; 2nd, by being chilled, and remaining so for a long time, from want of exercise. To avoid colds from the former, we have only to go to a fire the moment the exercise ceases, in the winter. If in summer, repair at once to a closed room, and remain with the same clothing on until cooled off. To avoid colds from the latter cause, and these engender the most speedily fatal diseases, such as pleurisies, croup and inflammation of the lungs, called pneumonia, we have only to compel ourselves to walk with sufficient vigor to keep off a feeling of chilliness. Attention to a precept contained in less than a dozen words would add twenty years to the average of civilized life. *Keep away chilliness by exercise; cool off slowly.* Then you will never take cold, in door or out.

WHITEWASHING.

There is nothing, perhaps, which contributes more decidedly to the healthiness of a homestead than whitewash. It is a cheap article, and any one who can lift a brush can put it on. Fences and rough siding as well as the inside of the tie-ups, sheds and other outbuildings, and also the walls and ceilings of the cellars, should annually be paid over with a good coat of whitewash. The spring is the most eligible season for the application, as there is generally sufficient leisure at that time before spring's work comes on, and as the disinfecting and deodorizing action of the lime will tend to prevent those unhealthy miasma which are generated around most dwellings, by the decay of vegetable matter, and the heat of the vernal and summer sun. The months of October and November, also, usually afford good opportunities to do this work, at intervals between harvesting, draining, collecting muck, &c.

White walls, and long lines of white fences gleaming amid luxuriant and embowering foliage, give to a farm establishment an appearance of neatness and rural elegance and comfort, indescribably attractive to the man of taste, and can in no way be so effectually and economically secured as by giving them a few coats of whitewash. The ceilings of bed-rooms, cookeries, and wash rooms, should also be frequently whitewashed. If the walls are not papered, the brush should pass over them likewise. The lime will not only tend to sweeten the air and prevent epidemical diseases, but fill up the thousand imperceptible cracks which always exist in plastering, and through which more cold air will find its way in a windy winter's day, than can be neutralized by many an armful of hickory, maple or white oak.

The whitewashing of cattle and horse stalls, as well as the inside of hog cotes and heneries, not only renders them more healthy, but prevents the animals and fowls from being infested with troublesome and filthy vermin.

For the New England Farmer.

AUTUMN.

BY AUGUSTA COOPER KIMBALL.

Kind Autumn comes in view, with stately tread,
Wearing her olden robe of gold and red,
And clustered grape-vines, drooping from her head.

She decks, with gaudy trimmings, every place;
The forests blush to feel her gay embrace,
Yet melancholy's tinge is on her face.

Behind her follow all the fabled train,
That over Nature's produce hold their reign;
The unseen guardians of the hill and plain.

Bright Ceres, goddess of the harvest fields,
With ardent pride, that is not half concealed,
Hastens her yellow offering to yield.

Fair-cheeked Pomona, in the orchard seen,
Culls choicest fruit, the bending boughs between,
And runs to greet the advancing autumn queen.

Now, only in the distance, we descry
The mellow lustre of her lambent eye,
And gay apparelling, we know her by.

But soon her presence will be everywhere;
Her changing breath will scent the breezy air,
And amber light roll from her yellow hair.

The farmer, glad, will view the golden store,
Heaped on his spacious, oaken, threshing floor;
With such full barns, he could not wish for more.

And when the harvest moon rides up in air,
Youths with browned cheeks, and country maidens fair,
Perchance may make a merry husking there.

While in the farm-house, rows of pumpkin pies,
With luscious fruits and cakes of ample size,
The white-capped matron for the group supplies.

When vale and mount shall don a russet gown,
And leaflets, dying with a tint of brown,
Shall fall with wavering movement to the ground,

With empty baskets, laugh, and childish cheer,
In woodland aisles, will eager groups appear,
To gather trophies of the fruitful year.

And tarrying long, the mother mild at home,
Will anxious watch the paths where they have gone,
And worrying, list for noisy ones to come.

But when the sun has left the forest road,
Each rambler then will hasten with his load;
With nuts, hats, caps and baskets are o'er flowed.

Such are the joys kind Autumn, thou dost bring,
When verdure on the bough no more may cling,
And summer birds no longer stay to sing.

From this small tribute I could not refrain;
Although the lay is weak, and short the strain,
Yet is it large, with love for all thy reign.

For the New England Farmer.

DRESSING OF GRASS LANDS.

The main purpose on many farms is to raise a good crop of grass, that is, about two tons to the acre, exclusive of the second crop. I know of farms where this has been done for thirty years, or more, without disturbing the sod in the meantime. How is this brought about? By occasionally applying a top dressing of some fertilizing material. Land situated near the shore of the sea, as are the grass-producing fields at Marblehead, are most conveniently dressed by material collected from the beach. When so situate, that sea manure cannot be obtained, a compost can

be made for the purpose. If in either of their modes of dressing, one-half or more of the labor can be saved, as compared with the ordinary manner of culture, it is a saving worthy of notice, for it should ever be borne in mind, that "accumulation does not depend so much on *getting*, as on *saving*." I believe that much labor is lost, by attempting to renovate fields of grass, by the use of the plow and the hoe, when it can be come at in a shorter way. I believe that it is so done, because our fathers so did it. I remember, when a boy on the home farm, it was thought absolutely necessary to break up all our mowing fields, once at least, in every eight or ten years. The inquiry in the spring was, what field shall be plowed for corn this year? and to answer this, the next inquiry was, how long since it was laid down? and so the rotation of crops went on from generation to generation.

ONE OF THE OLD SCHOOL.

EXTRACTS AND REPLIES.

A BARREN GRAPE VINE.

A few years ago, I set out a grape vine, and I have taken great pains with it from that time till the present; pruned it every fall, manured with old bones, wash from the house, &c., yet it has not borne a grape. It blossoms full, and then comes the blasting, and they are all gone.

Now, can you, or any of your subscribers, give me any information what to do? cut down, or try another year? Some say that there is a male and female root—that one was destroyed in transplanting, therefore, the vine is worthless; others that the vine would bear if a bud was inserted.

Burlington, Vt., Oct. 1, 1858. B. C.

REMARKS.—Your case is not an uncommon one. We know of grape vines by the way-side that blossom annually, shedding a delightful fragrance all around them, but never bear a grape. But such vines stand alone, far from any other grape. Yours is probably in the same condition, needing fructification from some other plant.

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FINE SECKEL PEARS.

Supposing that you are, like other men, in favor of good fruit, I take the liberty to send you a small box of Seckel pears, in hopes that they will give you as much pleasure in eating them, as it gives me to send them. I am a constant reader of your paper, and hope they will in some measure repay you for your exertions in the cause of fruit-growing.

Yours truly, B. HEDGE.

Plymouth, Oct. 6, 1858.

REMARKS.—We make you our best bow, sir—and if the goddess Pomona were present, she should bow and smile upon you too. Why, we never saw such a basket of Seckel pears *given away* before. Had it not been for the plain note before us, under your own "sign manual," we certainly should have supposed the Express man under a mistake, and sent him over to Quincy Market with them. They beat all the Cattle Show Seckels we have seen. Thank you, sir.

AGES OF ANIMALS.

Will you inform me through the *Farmer*, the time when Cambridge and Brighton cattle dealers change on the ages of young cattle, or in other words, when is a two year old called a three year old? Some drovers have represented, that they change on the age late in the summer when younger cattle are taken to market, while here we change on the age in the spring, when cattle are wintered through.

Is the sumac of commerce, the same that grows wild in Vermont? Here it is a small tree, very branching, from 12 to 20 feet in height, with red berries in compact clusters, and wood of a yellow color. VERMONT.

Ryegate, Vt., 1858.

REMARKS.—We cannot say when the Cambridge and Brighton dealers, change their terms of age in cattle. Your change is right, whatever they may do. It is the easiest and safest way to call things by their right names. A calf that was born in April, 1856, is two years in April, 1858, of course. Farmers about us use the terms "past" or "coming." That is, if an animal has just passed two years, and the age is inquired after, the reply is, "*two years past*;" or if its age is nearer three than two years, then it is "*three years old coming*." Everybody can understand this.

The sumac you describe, is the sumac of the shops.

—

GRASSES.

I send you some grass which grew in a piece of bog meadow of one of my neighbors, which he broke up lately, to seed down to English grass. This grass is unknown to us. It grows about three feet high, and appears to be of a wild nature; my neighbor says it makes first rate fodder. Please give us the name of it, if you know.

Will fowl meadow grass do well on bog or peat meadow, where the stumps were taken out some ten or fifteen years ago? It is covered with steeple weed, or hard-hack, moss, and other foul stuff; the mud is from two to five feet deep. If it will do well, tell me how I must prepare it for the seed, how much to the acre, and when it must be sown. S. DENHAM.

South Hanson.

REMARKS.—The grass sent we do not remember to have seen before. The fowl meadow grass will undoubtedly do well on the land you describe.

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PLUMS AND MELON VINES.

DEAR SIR:—I herewith send you $2, which I believe pays for your valuable and interesting paper one year from Sept. 1st, 1858. I notice that a very beautiful engraving of those plums I sent you a little more than a year ago, has made its appearance in your paper of Oct. 2d, and as one of your readers, I agree with you, in saying it is an admirable work of art, as much so as the plums themselves were an admirable work of nature. There is, however, a slight mistake. Instead of H. P. Wiswall, Marlboro', Mass., it

should be H. T. Wiswall, Marlboro', N. H. By persevering in the jarring process, I have managed to save a beautiful crop of plums the present year, notwithstanding the curculio, that great enemy of fruit.

I wish to inquire of you, or some of your correspondents, what is the cause of, and the remedy for, the blast on melon vines? For two seasons past, I have nearly lost several large fine beds of them. I managed pretty well to keep off the bugs by killing them, which I consider the best way; they grow finely till about the time they begin to blossom and set for melons; then black spots begin to come on the leaves, a rust strikes the vine at the root, and proceeds with greater or less rapidity to the end of the vine, that being the last to hold out against its baneful influence.

We were very glad to see and hear Judge French at our County Fair in Keene, and to learn that a judge and lawyer can be a practical farmer.

H. T. WISWALL.

Marlboro', N. H., Oct., 1858.

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TRANSPLANTING EVERGREENS.

MR. EDITOR:—As the subject of transplanting our native evergreens has some time occupied a place in your columns, I will give you my experience.

Three years since, in April, 1855, I brought from the woods a single white pine, (*Pinus Strobus*) with a ball of earth attached. I set it near the house, and it lived without further trouble. Encouraged by this, last year, in the first week in May, I transplanted sixteen more in the same way, taking up each one carefully with a ball of earth upon the roots; but one of these died. In May, again, this year, I transplanted twenty-five in the same way, and every one is living, and most of them have made three or four inches of new wood. These trees were from three to eight feet high, growing in dry open woods. From these experiments, I think there can be no trouble in moving the pine, and this variety, one of the finest of our native trees, is worthy a place in any collection. POCASSETT.

Cranston, R. I., Sept. 16, 1858.

—

A NICE LOT OF POTATOES.

As a matter of experiment, I planted in my garden one potato, the 19th day of May, in six hills. I dug them to-day, and from that one I had half a bushel of large and fair potatoes, without any extra care. F. C. SHALLER.

Essex, Mass., Sept. 30, 1858.

—

FINE YIELD OF POTATOES.

I obtained last winter 5 potatoes; they were not large. I planted them in 21 hills, one piece in the hill, and used no manure. I dug them last Saturday, and obtained 2½ bushels—3 potatoes weighing 5 pounds, and 79 of them weighed 67 pounds. W. N. W.

Derry, Oct. 9, 1858.

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OBSERVATIONS ON THE POTATO.

Mr. JACOB GROVER, of West Mansfield, Mass., writes us that his seed potatoes that were covered in the cellar with loam and gravel, have produced sound potatoes, while others not so covered, but of the same kind, and planted on the same kind of land, have rotted badly.

—

DAVIS SEEDLING POTATOES.

Mr. J. P. WATSON, of this place, planted 13 pounds of the above seed this year, which yielded 720 pounds. Allowing 60 pounds to the bushel, it would make 12 bushels of potatoes. A. B.

Jamaica, Vt., Oct. 2, 1858.

—

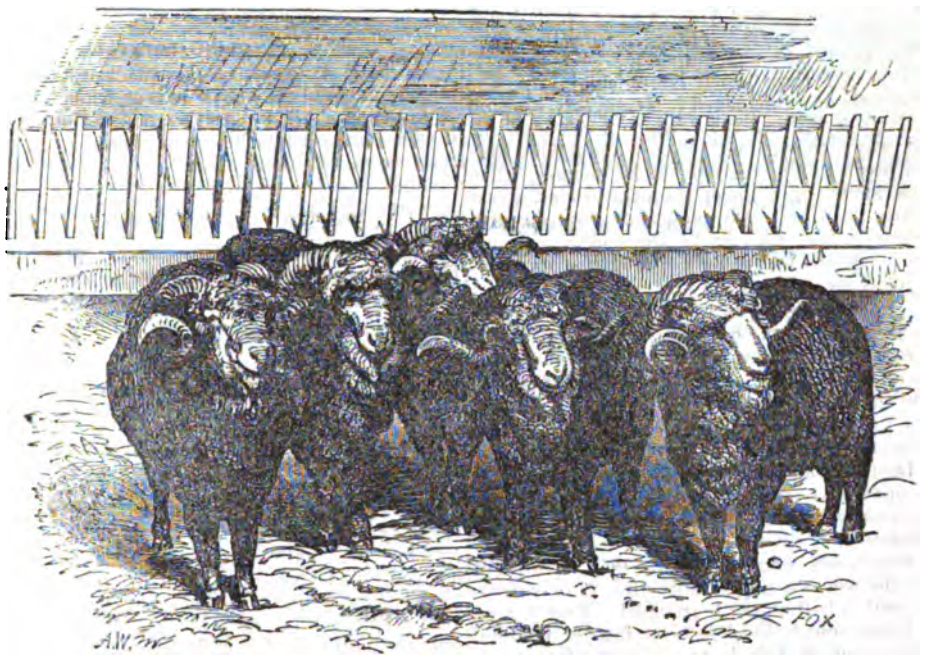
CULTURE OF CRANBERRIES.

Our correspondent at *Somerset, Mass.*, may find a detailed account of the best modes of cultivating cranberries in our volume of the *Farmer*, for last year, 1857.

HOW TO MAKE HOME HAPPY.

Do not jest with your wife upon a subject in which there is danger of wounding her feelings. Remember that she treasures every word you utter, though you never think of it again. Do not speak of some virtue in another man's wife, to remind your own of a fault. Do not reproach your wife with personal defects, for if she has sensibility, you inflict a wound difficult to heal. Do not treat your wife with inattention in company. Do not upbraid her in the presence of a third person, nor entertain her with praising the beauty and accomplishments of other women. If you would have a pleasant home and cheerful wife, pass your evenings under your own roof. Do not be stern and silent in your own house, and remarkable for sociability elsewhere. Remember that your wife has as much need of recreation as yourself, and devote a portion, at least, of your leisure hours to such society and amusements as she may join. By so doing, you will secure her smiles and increase her affection. Do not, by being too exact in pecuniary matters, make your wife feel her dependence on your bounty. If she is a sensible woman, she should be acquainted with your business and know your income, that she may regulate her household expenses accordingly. Do not withhold this knowledge, in order to cover your own extravagance. Women have a keen perception—be sure she will discover your selfishness,—and though no word is spoken, from that moment her respect is lessened, and her confidence diminished, pride wounded, and a thousand, perhaps unjust, suspicions created. From that moment is your domestic comfort on the wane. There can be no oneness where there is no full confidence.—*Woman's Thoughts About Women.*

IS CHARCOAL LIABLE TO SPONTANEOUS COMBUSTION.—Under this caption the reader will find in another column, a very interesting article by Dr. CHARLES T. JACKSON, the distinguished chemist of Boston. The attention of builders, carpenters and masons is especially called to it, as a proper understanding of the matter may save many a building from destruction by fire.



SPANISH MERINO BUCKS.

We present the reader in this issue of the *Farmer* with a beautiful illustration of a group of *Spanish Merino Bucks*, from the flock of GEORGE CAMPBELL, Esq., of West Westminster, Vt. He visited Spain several years since, and selected from the finest flocks he could find in that country; these bucks are descendants of that stock. He has made the raising of fine wooled sheep a business and study, and the success which has followed his labors is evidence of his skill. These bucks sometimes produce immense fleeces. We weighed a fleece from one of them, while visiting Mr. Campbell, and found it tip the beam quick at 22 pounds! His ewe fleeces of 1852, when well washed, averaged 5½ pounds. His two year old ewes gave an average of 8 pounds, on a growth of only eleven months. We wish him great success in his good work.

For the New England Farmer.

GRAFTED FRUIT TREES.

MR. EDITOR:—Fruit trees with us, I mean grafted trees, do poorly, and the remark is often made, "They did not use to be so bad—why are they now?"

To reply to this, I will say that in those days scions were *not* taken from old trees, the vital force of which was almost spent, but from vigorous, youthful trees, perhaps, and the scions were inserted in stock of similar character; in this way a good thing, one which we can hardly do without, was perpetuated, for a long time, on natural principles, and may be again and again, I believe, to many generations.

That the above reply is brief, is true, still if sufficiently suggestive of practical reform in the subject to which it relates, I can but hope that it will find a place in due time in your valuable paper, for the approved object of life is to benefit one another. W. S. BLANCHARD.

Walpole, N. H., Sept. 27, 1858.

TO MAKE HARD CANDLES OF SOFT TALLOW.

I noticed a request a short time since in the *Country Gentleman*, for a receipt to make soft tallow hard. I send you one I know by experience to be good. To twelve pounds of tallow take half a gallon of water, to which add three table-spoons of pulverized alum, and two do. saltpetre, which heat and dissolve; then add your tallow and one pound of beeswax; boil hard all together, until the water evaporates, and skim well while boiling. It should not be put in your moulds hotter than you can bear your hand in. The candles look much nicer when the wicks are not tied at the bottom. It is not only a disagreeable task to cut the wick off, but it injures the moulds. Never heat your moulds to draw your candles in cold weather.

Perhaps it is not generally known that tallow from beeves fed on corn or grain, is much softer than when fed on grass or clover. Therefore the tallow from grass-fed cattle should always be hard with the addition of very little alum and beeswax. In very cold weather much less alum must be used, or they will crack so as to fall to pieces sometimes; and a third more of each should be used in very warm weather if the tallow is very soft. With a little management you can always have hard tallow for summer use where you make all your own candles.—*Country Gentleman.*

For the New England Farmer.

MATERIALS FOR ROOFING.

DEAR SIR:—Sometime since you asked me some questions about the best roofing material for farmers to use. I lay it down as a principle to commence with, that the best roof is the best for a farmer, as it is the one which, although it may cost most at starting, will last the longest, and preserve his crops from all loss by bad weather.

The time-honored roof in New England is shingles, and roofs are occasionally to be seen which have been shingled from 30 to 40 years, and have needed only occasional repairs. Such instances are very rare, and it may be assumed that the best shingle roof which can be laid will not last more than 15 to 20 years—longer, most of your readers will say, than they shall need it. Such a roof will cost, for shingles, $5,50 to $6 per thousand, and $1 to lay them; total cost, $6,50 to $7 per thousand. 1000 shingles cover a little more than 100 square feet for the roof; and how much more on an average I do not know; the makers of shingles don't intend them to cover any more.

The next roofs, in point of cost, are those made of tar, gravel, cement and composition. These roofs originated farther west than New England, where shingles are even more scarce than here.

There are several great objections to all such; any roof made in one piece is valuless in a climate like ours; it does not admit of any expansion and contraction; the expansion of a roof under our summer suns is very great; and under the direct rays of January and February it is very appreciable. The contraction caused by a sudden frost is proportionally large. India rubber may stand it, but no solid material can, unless there is some allowance for the play. Consequently you will find that all these roofs crack around the chimney, under the eaves, and wherever they join the wood-work. If the coat applied is not very thick, the cold penetrates to the boarding, below, which, being of different density from the roofing, expands and contracts differently from it, and in time you will find cracks in the roofing over the joints in the boards below.

If the material is put on thick enough to keep out cold it is very heavy and expensive. An argument for such roofs is, they may be nearly flat; this is no gain in a barn, and is a loss in a house, for a flat roof allows of no garret, and a house without a garret is like a coat without pockets. Besides, flat-roofed houses have to stand an enormous strain, from the weight of snow which falls upon them, and are destitute of all the picturesque effect of pitched roofs.

Tin, zinc and galvanized iron roofs are all objectionable for the reason just given, that they are in one piece, and as metals, they are even more affected by heat and cold than other materials. Besides, they must be painted often to keep them in order, and then, at best, they wear out in a short time; their cost is double that of best shingles.

Another material for roofing is slate; this was first imported from Europe, and is still. The Welsh slate is sold, and used all over our country, and is acknowledged to be the best slate, and a standard for all slate used for roofing purposes. The advantages of slate are, it comes in pieces like shingles, of any size one wishes; it is fire-proof, unaffected by heat and cold, imperishable, and may at any time be taken off the roof and relaid with small loss, should there be any necessity for so doing. The Welsh slate is costly, though less expensive than metal.

There are several varieties of slate found in this country; these differ very much in quality; the difference is shown in thickness, breaking under the foot, and by the action of frost. Very much of the American slate absorbs water; a slate which absorbs water will be easily broken by the frost of winter, and any observant person will see, upon looking at the roofs of many of our buildings, slates gone, corners broken off, &c.; this is attributable to the slate being of poor quality, or being made across the grain. Singular though it may seem to you, some slate can be made across the grain, just as you could saw a shingle across the grain. Of course such a slate or shingle has no strength. The power in soft slate which absorbs the water and therefore freezes and breaks, may be detected by setting a slate carefully, half its depth, into a pail of water; the water will be seen to ascend it quite rapidly. By putting several slates from different quarries, into a pail at the same time, it will be easy to ascertain their relative powers of resisting water and frost. It was this trouble which rendered the slate of the Hoosac mountain of no value. Large quarries of slate are found in New Jersey and Pennsylvania; it is all soft, and will rot on the roof. So, also, will the slate of the State of Maine; much of that is soft, whilst in the same quarry slate is found that is first-rate.

The veins there are narrow and parallel. Some of these veins are hard and excellent, others poor and soft, and when made into slate, the purchaser is liable to get slate of first-rate or of very inferior quality. I have known roofs laid with this slate to rot within 5 years, and have to be relaid. This slate, the Hoosac and New Jersey, are all black.

In Vermont large quarries of slate exist; these differ very much in quality. Their color is all much alike, purple, brown and green. The Vermont slates, however, have one peculiarity in their favor and to their injury. Some of these slate change color when exposed to the rays of the sun, others do not; those that do fade are hard and unaffected by frost or heat; those that do not fade are soft and very rotten and easily broken by frost. A quarry somewhat noted for this failing is called the Western Vermont.

This test of fading or holding color settles the

question of strength. The hard slates differ in quality; some are thick and slabby, others thin, of uniform size, thickness and grain, and in all respects but color, are equal to the Welsh slates, and are much cheaper.

Some persons who make thick slates endeavor to discredit the thinner slates by saying that the latter lack strength, and that a roof, to be well protected, should be strong enough to hold up thick slate. This reasoning is like that of the fox who lost his tail in the trap and then tried to persuade the other foxes it was vastly better to do without tails. These people split their slates as thin as they can; the thin slates are made so for their superior quality and grain, and could be split thick as well as thin, were they not better thin than thick.

To test this last operation, take specimen slates from different quarries and rest them by their thin ends on supports; now put weights on the middle of the slate till they break, and you will find that in the great majority of cases the thin will bear the largest weight; they are stronger than the other kinds.

These best slate are made in the Glen Lake and Eagle quarries; the former are the most uniform and thinnest. They average 55—60 to the foot, and 4 squares to the tun. These measurements and weights are the same with the Welsh slate, which I said at the commencement are the standard. A square of slate is what will cover 10 ⋈ 10, or 100 square feet, on the roof of a house, or is equivalent to 1000 shingles.

These best slate can be had in Boston or its vicinity, for $7 per square; about the same price with shingles, and are fire-proof, unaffected by heat and cold, and, in a word, imperishable. The only objection to them is the change of color, which is but slight, in no way affects the strength of the slate and if the slate are carefully selected, they all fade about the same, and in a year or two the difference is hardly perceptible.

It seems to me that these facts prove conclusively that slate roofs are the only roofs an economical farmer can afford to lay.

I remain yours respectfully,

RUSTICUS.

THE CAMELS.

There is, after all, a fair prospect of the Arabian camel becoming a regularly naturalized and American citizen. Our government, on two separate occasions, has imported cargoes of camels, in order, if possible, to acclimatize them for long journeys over the dreary plains of the south-west. Lieut. Beale, formerly of the navy, and superintendent of the construction of the new military road from Texas to the Colorado river in California, has made the exploration, occupying forty-eight days, and located an excellent wagon road, the whole distance. On this exploration the camel was the tried animal, and it seems it surpassed his expectations for patience, endurance and fitness for American desert travel. He says respecting it:—

"Unsupported by the testimony of every man of my party, I should be unwilling to state all that I have seen them do. Starting with a full determination that the experiment should be no half-way one, I have subjected them to trials which no other animal could possibly have endured, and yet I have arrived here not only without the loss of a camel, but they are admitted, by those who saw them in Texas, to be in as good condition to-day as when we left San Antonio. In all our lateral explorations, they have carried water sometimes for more than a week, for the mules used by the men, the camels never even receiving a bucketful each.

"They have traversed patiently with heavy packs on these explorations, countries covered with the sharpest volcanic rock, and yet their feet, to this hour, have evinced no symptom of tenderness or injury. With heavy packs they have crossed mountains, ascended and descended precipitous places, where an unloaded mule found it difficult to pass, even with the assistance of the rider dismounted, and carefully picking its way. I think it would be within bounds to say that in these various lateral explorations they have traversed nearly double the distance passed over by our mules and wagons."—*Scientific American.*

For the New England Farmer.

NORFOLK AGRICULTURAL SOCIETY.

FRIEND BROWN:—The report, in your last paper, of the Exhibition of the Norfolk Agricultural Society, as taken from another journal, is so one-sided a statement, that I feel it my duty to make you acquainted with the facts in the case, and as a verification of the same, I enclose the report of the *Cultivator*, *Ploughman* and *Traveller*. The Norfolk Society never held so good an exhibition, or one crowned with more entire success. The "Reporter" you quote says, "*there were a few fine horses and some milch cows.*" Now there were 120 entries of horses, and it is not too much to say that no county exhibition has ever surpassed them in excellence. As to "some milch cows," Messrs. Motley, Bacon, Hunnewell and others showed very fine animals in this class. The pens, 150 in number, were filled and Mr. Motley alone exhibited 25 head, two of Jersey Grade, and for two or three of his cows he had been offered five hundred dollars each.

The exhibition of fruits was remarkably fine—that of vegetables excellent. There were 20 entries of bread and 14 of butter. The articles in the department of female industry, exclusive of the ladies' fair, filled a table more than 100 feet in length, and constituted a fine feature of the exhibition.

The Ladies' Fair in the upper hall, notwithstanding "Reporter," was on a most extensive and magnificent scale, occupying most of a hall 135 feet long and 58 feet wide, and was an honor to the mothers and daughters of Old Norfolk, embracing in their number ladies of the highest distinction in the county. These ladies were the friends and patrons of the society, and with most generous and praiseworthy labors volunteered their services to aid in raising funds towards paying for the recent purchase of lands. As to the base ball match, permission was given by the Committee of Arrangements, for the clubs from our own towns to play a game, after the stock was removed, and the exhibition was over on the ground.

The plowing match was decidedly the best l

ever witnessed, and the spading match, in which eleven hardy sons united, was one of great interest.

The attendance was estimated at 15,000 persons, and not far from the truth, as we took for ten-cent tickets, exclusive of the ladies' fair, seventeen hundred dollars. But I refrain from further remarks. NORFOLK.

REMARKS.—It is always an unwelcome duty to us, to find fault with anybody, and more especially those who are exemplary in almost everything, and whom we delight to honor. The Norfolk Agricultural Society cannot have a very limited influence, made up as it is of men so well known, who mingle so largely with the people of the State. As a general thing, her Exhibitions have been models, and the publications of her Transactions are certainly worthy of all imitation.

We did not intend, in what we said of it last week, to give an account of the Exhibition, because in the multiplicity of these occurrences, we had neither time or space to do it. We only intended, in the kindest spirit, to notice what we thought were encroachments upon her excellent example heretofore, so that, if they *were* encroachments, a calm and candid criticism might call attention to the fact. Nothing more. No person can have a higher respect for the officers and managers of that society than we entertain.

The remarks of "Norfolk" above will show that the exhibition was such an one as is rarely excelled, if equalled, in the State, both in the amount and quality of the articles and stock exhibited. But as "to err is human," it is still possible that some things may have been done, that it were well to have left undone. We intend that all our criticisms shall be candid and fair; if they do not appear so to others, we will repair the fault—if fault it is found to be—to the best of our ability.

As a public journalist, and taking the strongest interest in the noble institution which enables us to compare the skill of the husbandman and the product of his labors, we feel bound to defend it against all invasions, and to exert whatever influence we may to preserve it as pure as we found it. That encroachments are made that will eventually destroy its good influence unless arrested, scarcely admits of a doubt. The germ of destruction, like a worm in the bud, is, in some instances, already introduced. Whether it shall be cherished there, and do its work, or whether its progress shall be stayed, depends upon the firmness and wisdom of those who control it.

A NEW FIRE LADDER.—A valuable ladder has been devised by some one in Ohio. It is spoken of in the Cincinnati *Gazette*. Turning a crank extends the reach of the ladder from a very few feet to seventy-five feet. When its length is sufficient for the use required of it, it is hooked upon the roof or other convenient place. At the upper end is a pulley over which a rope is drawn, with a basket attached, into which persons or valuables may be placed and safely removed. The bottom rests upon a carriage, for the sake of rapid transportation.

For the New England Farmer.

WHEAT AND WHAT IT COSTS.

I send you the product and cost of a crop of spring wheat raised by me this year, on about 6½ acres of land. In this account the labor is charged at its *cost;* labor of a pair of oxen is charged at 96 cents per day; horse the same; board of men at 33⅓ cents per day; no manure charged, none having been applied. One piece of the land, about 1½ acres, was never before plowed. I assume the value of the land to be $100 per acre, and the price of the grain to be what I think it is worth to me for consumption.

PRODUCT.		
76 bushels wheat at $2	$152,00	
6½ tons straw (estimated) $6	39,00	$191,00
COST.		
Plowing, harrowing, sowing, rolling, and labor	$5,90	
" " and team	8,90	
Board of men at 33⅓	5,00	$19,80
One-half chargable to succeeding crop of clover and grass		9,90
		$9,90
Cradling, threshing and winnowing and labor		15,50
" " carting and team		2,92
Board of men at 33⅓ per day		7,67
12 bushels seed		24,00
		$59,99
6 per cent. on $650, assumed value of land		39,00
		$98,99

Taking my estimate of the value of the grain and land and the quantity of the straw to be correct, it will be seen that the crop has paid a profit of 93 per cent.; the product per acre being about an average crop. The like results may, I think, be reached 9 years in 10, and often exceeded, with suitable soil and cultivation.

SAMUEL RAYMOND.

North Andover, Mass., Oct. 4, 1858.

ON THE MORNING.

It is morning—and a morning sweet and fresh, and delightful. Everybody knows the morning, in its metaphorical sense, applied to so many objects, and on so many occasions. The health, strength, and beauty of early years, lead us to call that period the "morning of life." Of a lovely young woman, we say, she is "bright as the morning," and no one doubts why Lucifer is called "son of the morning." But the morning itself, few people, inhabitants of cities, know any thing about. Among all our good people of Boston, not one in a thousand sees the sun rise once a year. They know nothing of the morning. Their idea of it is, that it is that part of the day which comes along after a cup of coffee and a beefsteak, or a piece of toast. With them, morning is not a new issuing of light; a new bursting forth of the sun; a new waking up of all that has life, from a sort of temporary death, to behold again the works of God, the heavens and the

earth; it is only a part of the domestic day, belonging to breakfast, to reading the newspapers, answering notes, sending the children to school, and giving orders for dinner. The first faint streak of light, the earliest purpling of the east, which the lark springs up to greet, and the deeper and deeper coloring into orange and red, till at length the "glorious sun is seen, regent of day," this they never enjoy, for this they never see.

Beautiful descriptions of the "morning" abound in all languages, but they are the strongest perhaps in those of the East, where the sun is so often an object of worship. King David speaks of taking to himself "the wings of the morning." This is highly poetical and beautiful. The "wings of the morning" are the beams of the rising sun. Rays of light are wings. It is thus said that the Sun of Righteousness shall arise, "with healing in his wings;" a rising sun, which shall scatter light, and health, and joy throughout the universe. Milton has fine descriptions of morning, but not so many as Shakspeare, from whose writings pages of the most beautiful images, all founded on the glory of the morning, might be filled.

I never thought that Adam had much advantage of us, from having seen the world while it was new. The manifestations of the power of God, like His mercies, are "new every morning," and "fresh every evening." We see as fine risings of the sun as ever Adam saw, and its risings are as much a miracle now as they were in his day, and I think a good deal more, because it is now a part of the miracle that for thousands and thousands of years, he has come to his appointed time, without the variation of a millionth part of a second. Adam could not tell how this might be!

I know the morning; I am acquainted with it, and I love it, fresh and sweet as it is, a daily new creation, breaking forth, and calling all that have life, and breath, and being, to new adoration, new enjoyments, and new gratitude.—*Webster's Private Correspondence.*

PLANTING BULBS, TUBERS, &c.

The earliest and prettiest of our spring flowers are bulbous rooted, and those who desire a fine show of flowers in the spring should lose no time in preparing their beds and planting. All bulbous roots delight in a deep, friable soil, and the ground should be put to proper condition before planting. Dig at least eighteen inches deep, and thoroughly mix with the soil a good portion of well-rotted manure. If the planting is done at once a good show of flowers may be expected in the spring.

The CROCUS is well known and popular. There are a great many varieties, all of them pretty, and they can be purchased at from $1 to $2 per hundred. Plant two inches deep, three inches apart in the row, and the rows six inches.

The HYACINTH should have a place in every garden, as they are not only beautiful but very fragrant. They are of all colors, single and double. Plant four inches deep, and from six to eight inches apart each way.

The TULIPS are too well known to need description. Plant about the same as the hyacinth.

The NARCISSUS, JONQUILS, LILIES and PÆONIES should be planted as soon as the ground is ready. After planting, rake off the bed nicely, and cover with coarse manure or straw, to protect the bulbs a little from the severity of the winter. This must be raked off early in the spring. —*Rural New-Yorker.*

For the New England Farmer.

LETTER FROM MAINE.

MR. EDITOR:—Having an opportunity to attend the Cattle Show and Fair of the Androscoggin Society at Lewiston, I avail myself of a few moments to give you a brief account of one of the Fairs in Maine, especially for the purpose of showing that there is progress in the right direction in the Dirigo State.

The Fair was held on the 5th, 6th and 7th of Oct. The first day was devoted to stock. The most noticeable feature was the fine Durhams and Devons. There was a large number of entries made. As the Poland Shakers live within the precincts of this Society, they were represented by a herd of twenty Devons.

The exhibition of the speed of horses occurred the second day, and was conducted with good order. The hall in which the Fair and *the fair* were assembled in great dimensions, was very fine. The vegetables were numerous and large. The display of fruit, especially of apples, was very excellent, I have seldom if ever seen so large and so well developed specimens of the oldest and best known varieties of this fruit.

Another most interesting feature was the certainty that several varieties of grapes have been found which will ripen well in Maine. The old varieties of Isabella and Sweetwater must give way to others that will ripen earlier, such as the Clinton, Northern Muscadine, Diana, Rebecca, Concord, and perhaps many others equally good which have ripened well here this season, while as much cannot be said of the older varieties. Thanks, very many, to the efforts of horticulturists who have labored so perseveringly in this matter. I was surprised to find so good a tasting grape in the well ripened specimens of the Northern Muscadine. Mr. Tobie, at Lewiston, has succeeded remarkably well in the open culture of the grape. As attention has been paid the present season to girdling the vines to facilitate their ripening, I would mention that I have accomplished the same thing simply by partially breaking the vine above the cluster just sufficient to impair circulation. I do not remember whether the idea is original with me or not.

There was a large display of butter and cheese of most excellent quality. Among the most important contributions was that of agricultural implements and labor-saving machines, by your friend C. Keyes, who has opened an agricultural warehouse at Lewiston. Mr. K. appears to be just the man for the place, and we hope the time will not be far distant when the farmers of Maine will find his rooms the head-quarters in this section of the State. He owns an extensive scythe and tool factory in Wilton, and is capable of doing immense good to the farming interests of the State. Procuring of him one of your Massachusetts apple harvesters, I had to exhibit it all

the way home in the cars, the same as if it had been a bear.

On the third day an address was delivered by your correspondent, to a large crowd of farmers and their wives, sons and daughters, who never look more interesting than on such an occasion. In the afternoon an equestrian exhibition of the ladies took place.

One or two features of the exhibition took place, worthy of notice. One was the privilege of attaching the name of the exhibitor to his articles as soon as the committee have completed their examination. It enhances the value of an exhibition very much. Another was for the first time introduced to our county fairs, the attachment of different colored ribbons, according to the degree of merit in the animals. The effect, as they appeared in procession, was very pretty. I have seen no happier boy for many a day, than one I met on his way home, with his pair of steers decked out with a badge on their horns. Another feature was the promptness with which all the operations of the society were dispatched. This was owing to the tact of the President, Hon. ROBERT MARTIN, who was always ready to proceed to action at the appointed moment.

After an absence of eleven years, I was surprised to find such an investment of capital in Lewiston. There is no mistaking the fact that the place is destined ere long to be one of the great manufacturing cities of the land. The water power is immense. A hundred Irishmen are now at work by the company, grading streets and foundations for new factories. The foundations of a large city are all marked out, and will soon be occupied. The factories are all running and indicate a revival of business on a surer basis than during past years. But fearing I shall not interest your readers, I will close.

Bethel, Me., Oct. 7th, 1858. N. T. T.

For the New England Farmer.

MANGOLD WURTZELS.

MR. EDITOR:—For some time past, I have been desirous of placing before the readers of the *New England Farmer* a statement concerning the raising of mangold wurtzels. Every farmer is interested in the production of all articles by which he can the better improve the condition of his stock, and if by the production of these vegetables he can do that, he will give his attention to it.

For the past two years I have raised mangold wurtzels, for the purpose of trying the experiment, and of satisfying myself as to the profitableness of the production. This year I planted a small piece, 4 rods by 5, containing one-eighth of an acre of land. I plowed the land last fall and put on a good coat of manure. This spring I cross-plowed, and harrowed it. I planted the seeds in hills one and a half feet apart and the rows two feet apart. Many of the seeds, owing to the wetness of the spring, or from some other cause, rotted, and did not germinate, and plants from other hills were transplanted to supply the deficiency. The weeds were kept down by hoeing two or three times during the summer. This fall I gathered 160 bushels from the piece of ground. Many of them were very large, weighing from 12 to 15 pounds; and one measured 29 inches in circumference, and weighed 16½ pounds. Many of them measured 25 inches in circumference. At this rate 1280 bushels can be raised from the acre, or allowing only 1000 bushels to the acre, which I consider a moderate crop, for land under good cultivation, can farmers raise anything which will be more profitable? I planted these roots on moist land, and am satisfied that I cannot raise anything so profitable for stock from the same piece of land. I hope the farmers in this vicinity will consider this subject, and try the experiment, to satisfy themselves of the expediency of raising these roots for their stock.

If none of the seeds had rotted, I am satisfied that the crop would have been larger, for none of those which were transplanted grew as large as those which remained in the original hill.

Epping, N. H., Oct. 9th, 1858. B. F. P.

For the New England Farmer.

RAMBLES AMONG ROCKS, CONTINUED.

There is something in a rocky region which serves a wonderful purpose in developing men, and making them up to a manly greatness. But it has not occurred to every thinker, that in such places even pigs may come to a perfection of training, and to a discipline of manners such as is seldom seen in pigdom.

While stopping for a short time in a manufacturing village within twelve or fifteen miles of the city of Providence, I had occasion to call upon a farmer, and was kindly escorted to his house by a generous friend who led the way like a good pioneer. Just as we were about to touch the stone steps of his stone mansion, I felt rubbing against my ankle what I instantly supposed to be a kind and cousinly kitten. Upon looking down I was taken with quite a spirit of wonder, for the soft salutation, so feelingly given, I at once discovered, had come from a pig. He was too small a pig to do much in the way of verifying Scripture, whatever quantity of pearls might be cast before him; but there was something so gentlemanly in the manners of his pigship as to awaken considerable curiosity. He had a cleanly-looking face, as though recently from the place where the sow we read of in Scripture had been. His hair lay straight and orderly, as though some peculiar matron had mistaken his head for that of her husband, and had done the combing. His eye had as real a jewel in it as ever pig's eye possessed. His nose, judging by one of Napoleon's rules, indicated considerable talent and enterprise. His body was fashioned after a favorite model of piggy formation, and about six inches long, omitting the shore ends, that is, the head and tail. We afterwards learned that his proportions had been wonderfully enlarged within a few days. He then weighed, as we learned, the important amount of four pounds.

My companion and guide was immediately pleased and interested with the little fellow, viewing the neatness of his nose, the graceful turn of his tail, the gentleness, modesty and manliness of his motions. Indeed, he seemed to be a wonderful pig; but whether born to be a pet or a porker, to occupy a filthy pen or a neat parlor, we were unable to decide without learning his

past history and future prospects. So, after exchanging salutations with him, and expressing compliments, the signal was given at the door that admission was desired into the house of the pig's protector.

Immediately we heard the sound of footsteps, as of a lady descending a flight of stairs. The door opened. A gentle lady greeted us, and invited us up stairs to the apartments occupied by her husband. Piggy thereupon essayed to go up also, but she told him to remain. He had already indicated his desire for a more exalted position, by ascending the stone steps and putting his forward feet upon the threshold. But he stood, looking no little disappointed at the turn things were taking, when the lady directed him to wait below.

My friend was moved in behalf of the little fellow, who stood silent and sad, as quite broken-hearted; although in his bitter grief he was not able to cast forth a single pearly tear. He requested, as a special favor, that the pioneer of pig-greatness might be permitted to pursue whatever course his good judgment might dictate. The lady gracefully assented. We ascended a high and steep flight of stairs, when our lady friend, with a very nimble movement, ascended, allowing the pig prodigy to scamper up by her side. The lady started with some two steps from the door advantage of her competitor, and reached the top stair at the same instant it was touched by his hind hoofs.

He was allowed, for a few moments, to enjoy the liberty of the whole house, to show how well he could behave. Whether in the kitchen or the parlor, he seemed to know how to observe the proprieties of the place.

This gentlemanly little pig, we were told, weighed the whole of about four pounds, exclusive of the weight of his profound wisdom and understanding. The owner puts a high price upon the interest he has in the pig; so that, fond of money as he is, he peremptorily refused a quarter of a dollar per pound for him.

It is interesting to farmers to know what princely wisdom may be put into the form of a pig; and how pigs can be taught and trained in the ways of good behavior. I would that all children, in city and country, were as well instructed and disciplined. C.

Rhode Island, Oct. 2, 1858.

For the New England Farmer.

FAST HORSES.

The operations on the race course yesterday (or rather the want of operation there) strongly confirm the impressions that I have entertained, of the inexpediency of these trials of speed. After the imposition that was practiced upon the multitude, of taking their money, for what it was known at the time would not be exhibited, it is quite astonishing that the crowd should have retired so quietly from the field. When it appeared by the letter of Mr. Warren, that he had been notified by Mr. G. that his horse would not be wanted *that day*—it was very clear, that Mr. G. was playing a trickish game with all that were admitted. So has it ever been, with all the trials of speed that I have ever witnessed. *.

Oct. 15th, 1858.

MIDDLESEX AGRICULTURAL SOCIETY.—At the Annual meeting of this Society, holden at Concord, on the 29th of September, officers for the ensuing year were elected as follows:—JOHN S. KEYES, President; GEO. O. BRASTOW, ANDREW WELLINGTON, Vice-Presidents; JOSEPH REYNOLDS, Secretary; GEORGE HEYWOOD, Treasurer. A new Board of Trustees was also elected.

BOYS' DEPARTMENT.

THE STRUGGLE AND THE VICTORY.

"Johnny," said a farmer to his little boy, "it is time for you to go to the pasture and drive home the cattle."

Johnny was playing ball, and the pasture was a long way off; but he was accustomed to obey, so off he started without a word, as fast as his legs could carry him.

Being in a great hurry to get back to play, he only half let down the bars, and then hurried the cattle through, and one fine cow, in trying to crowd over, stumbled and fell with her leg broken.

Johnny stood by the suffering creature, and thought to himself, "Now what shall I do? That was the finest cow father had, and it will have to be killed, and it will be a great loss to father. What shall I tell him?"

"Tell him," whispered the tempter, the same tempter that puts wicked thoughts into all our hearts, "tell him you found the bars half down, and the creature lying here." "No, I can't say that," said Johnny, "for that would be a lie."

"Tell him," whispered the tempter again, "that while you were driving the cows, that big boy of Farmer Brown's threw a stone, and hurried that cow so that she fell." "No, no," said Johnny; "I never told a lie, and I won't begin now. I'll tell father the truth. It was all my fault. I was in a hurry, and I frightened the poor creature, and she fell and broke her leg."

So having taken this right and brave resolve, Johnny ran home as if he was afraid the tempter would catch him, and he went straight to his father and told him the whole truth. And what did his father do? He laid his hand on Johnny's head and said, "My son, my dear son, I would rather lose every cow I own, than that my boy should tell me an untruth."

And Johnny, though very sorry for the mischief he had done, was much happier than if he had lied to screen himself, even if he had never been found out.

DO THE RIGHT THING.

Whenever you are in doubt which of two things to do, let your decision be for that which is right. Do not waver, do not parley; but square up to the mark, and *do the right thing.* Boy! when you divide that apple with your little sister, be careful not to keep the largest half for yourself. Young man! don't sneak out of the basement door because you wish to escape your father's eyes. Maiden! let not the most trifling deceit pass current in those little acts which make the sum of your life.

No matter who you are, what your lot, or where you live, you cannot afford to do that which is wrong. The only way to obtain happiness and

pleasure yourself is to *do the right thing.* You may not always hit the mark; but you should, nevertheless, always AIM AT IT, and with every trial your skill will increase. Whether you are to be praised or blamed for it by others; whether it will seemingly make you richer or poorer, or whether no other person than yourself knows of your action, still, always, and in all cases, *do the right thing.* Your first lessons in this will grow easier, until finally doing the right thing will become a habit, and to do a wrong will seem an absolute impossibility.

LADIES' DEPARTMENT.

WEBSTER MATCHED BY A WOMAN.

In the somewhat famous case of Mrs. Bodgen's will, which was tried in the Supreme Court some years ago, Mr. Webster appeared as counsellor for the appellent. Mrs. Greenough, wife of Rev. Wm. Greenough, late of West Newton, a tall, straight, queenly-looking woman, with a keen black eye—a woman of great self-possession and decision of character, was called to the stand as a witness on the opposite side from Mr. Webster. Webster, at a glance, had the sagacity to foresee that her testimony, if it contained anything of importance, would have great weight with the court and jury. He therefore resolved, if possible, to break her up. And when she answered to the first question put to her, "I believe," Webster roared out, "We don't want to hear what you believe; we want to hear what you know!" Mrs. Greenough replied, "That is just what I was about tc say, sir," and went on with her testimony.

And notwithstanding his repeated efforts to disconcert her, she pursued the even tenor of her way, until Webster, becoming quite fearful of the result, arose apparently in great agitation, and drawing out his large snuff-box, thrust his thumb and finger to the very bottom, and carrying the deep pinch to both nostrils, drew it up with a gusto; and then extracting from his pocket a very large handkerchief, which flowed to his feet as he brought it to the front, he blew his nose with a report that rang distant and loud through the crowded hall. Webster—"Mrs. Greenough, was Mrs. Bodgen a neat woman?" Mrs. Greenough—"I cannot give you very full information as to that, sir; she had one very dirty trick." Webster—"What's that, ma'am?" Mrs. Greenough—"She took snuff!" The roar of the court-house was such that the future defender of the constitution subsided, and neither rose nor spoke again until after Mrs. Greenough had vacated her chair for another witness—having ample time to reflect upon the inglorious history of the man who had a stone thrown at his head by a woman.

DOMESTIC RECEIPTS.

A HARD AND DURABLE SOAP.—A patent has been granted in England for an improvement in the manufacture of soap, by the addition of sulphate of lime to the usual ingredients employed in its manufacture. The sulphate may be added to the soap in a dry powder, or in admixture with any of the usual ingredients employed in the manufacture of soap. The proportions of the sulphate which it is best to employ, vary according to the article manipulated upon, and the quality of the soap to be produced. Thus about twelve ounces of dry sulphate is sufficient for one ton of best soap, whereas, in common or highly liquored soap, six or eight pounds may be used with advantage. Soap, made with the addition of sulphate of lime, becomes hardened, keeps dry, and is not liable to shrink while in water, its durability is increased, and it does not wear or waste away before its cleansing properties are brought into action.—*Scientific American.*

INDIAN BANNOCK.—Take one pint of Indian meal, stir into it a pint of sour milk—fresh buttermilk is better—half a teaspoonful of salt, a spoonful of molasses, and a spoonful of melted butter. Beat two eggs and add, and then stir in a pint of wheat flour; then thin it with milk to the consistency of drop cakes, and when ready to bake, add two heaping teaspoonfuls of soda dissolved in hot water. Pour in square buttered pans an inch thick, and bake fifteen minutes. This quantity makes two pans. Try it.

VERMIN RIDDANCE.—Half an ounce of soap boiled in a pint of water and put on with a brush, while boiling hot, infallibly destroys the bugs and their eggs. Flies are driven out of a room by hanging up a bunch of the plantain or fleawort plant after it nas been dipped in milk. Rats and mice speedily disappear by mixing equal quantities of strong cheese and powdered squills. They devour this mixture with greediness, while it is innocuous to man. When it is remembered how many persons have lost their lives by swallowing in mistake mixtures of strychnine, ratsbane, corrosive sublimate, &c., which are commonly employed for this purpose, it becomes a matter of humanity to publish these items.—*Hall's Medical Journal.*

WASHINGTON CAKE.—Heat together one quart of milk, and one ounce of butter; when about lukewarm, pour them into two pounds of flour, adding a cent's worth of yeast, three eggs, and a tablespoonful of salt. Place the batter in pans, let it stand over night, and the next morning bake it in a quick oven for three-quarters of an hour.

LOAF CAKE.—Three teacupfuls of light dough, one teacupful of sugar, one teacupful of butter, two eggs, one teaspoonful of pearlash, and two or three large tablespoonfuls of milk; add also a half pound of raisins. After it is thoroughly worked together, put the dough into the pans, and raise until it becomes light. Bake in a slow oven.

WHAT THE GIRLS NEED.—Mrs. Ellis thus hints at the deficiencies of the English girls in household knowledge. The cap will fit our American young ladies, except that some of the latter have plenty of "frankness," and do not think it worth while even to show "mock modesty."

"The truth is, my dear girls, you want, generally speaking, more liberty and less fashionable restraint; more kitchen and less parlor; more leg exercise and less sofa; more making puddings and less piano; more frankness and less mock modesty; more breakfast and less bustle."

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

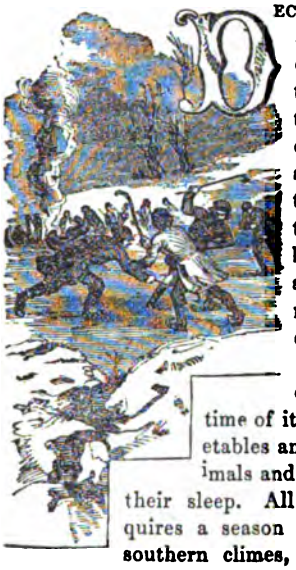
VOL. X. BOSTON, DECEMBER, 1858. NO. 12.

JOEL NOURSE, PROPRIETOR. OFFICE...13 COMMERCIAL ST. SIMON BROWN, EDITOR. FRED'K HOLBROOK, HENRY F. FRENCH, } ASSOCIATE EDITORS

CALENDAR FOR DECEMBER.

"What's that to me, *I cannot stay*; remember,
I am the thirty first of old DECEMBER."

"In April or in May,
A pleasant garden, full of fragrant flowers,
When the fresh earth, new clad in garments gay,
Decks every wood and grove with pleasant bowers.
And now again on some DECEMBER's day
We see it marred with winter's storms and showers."



DECEMBER. The days are now the shortest. The sun, from the distant south, throws his rays upon us for a few short hours, and that so obliquely, that they produce but little impression upon the atmosphere or the earth.

Now is the night of the year,—the time of its rest—when vegetables and hybernating animals and insects are taking their sleep. All vegetable life requires a season of rest. In more southern climes, the leaves wither, and dry and fall, before they are touched by the frost, and the trees remain naked and desolate, until the rainy season awakens them into new life and activity. The trees that open their buds and expand their leaves in February and March, drop their fruit in July and August, and commence their season of rest, while with us, the trees that open their buds in May, retain their leaves till the frosts of October paint them with a hundred brilliant hues.

Every climate has its own season of rest. In tropical climates, animals and insects which require a season of rest, burrow into the earth to avoid the heat and drought, and remain in a dormant state until the returning moisture recalls them to life and action. In the regions of the north, they go into the earth, and into caves and holes, to avoid the destructive effects of the cold and frost, and hybernate until the genial breath of spring quickens the organs of their peculiar forms of life, when they come forth, each to his appropriate work.

The Summer is for man, also, the season of labor, and the Winter the season of rest, when he may enjoy the fruits of his labor, and the pleasures appropriate to the Winter, and recruit his exhausted energies for the demands of another year. The Winter is with us peculiarly the season for social enjoyment and intellectual improvement. Our long winter evenings afford abundant opportunity for visiting and social intercourse, and fireside pleasures. Evening schools, singing schools, lectures, religious meetings, and public and private entertainmants afford to all classes abundant opportunity for pleasure, or instruction, or both, suited to their respective tastes. The lectures which are now so common all over the country, have become an important institution for good or for evil. The lyceum has to a great extent changed its original purpose, which was mutual instruction, the development of the faculties and the cultivation of the talents of its members, by the mutual pursuit of scientific or literary studies.

The lyceum lecture has now become more a matter of entertainment, and our people have become as fastidious, in the choice of lecturers, as city audiences are in the choice of actors on the boards of the theatre. Instruction the most solid, sentiments the most pure and elevating, and a style the most chaste and beautiful, will by no means satisfy the demands of our exacting audiences. Startling paradoxes, sparkling thoughts, brilliant illustrations, glowing descriptions, and the music of eloquence, are demanded, at whatever cost. We doubt whether the style of lecturing now in vogue is the most useful, either to the risen, or rising generation. Lectures which

teach the hearers to think and reflect, which extend their acquaintance with nature and art, with language and men, and which enforce lessons of duty and worship, better meet the purposes for which the lyceum was intended, and for which it is needed. It is, and should be, one of the means of education in the community. When it is made merely a source of amusement, like the theatre, and the opera, let it be so understood, and so called. Let it take some other name, and fall into its own proper class, and not, under the guise of a false name, draw in to its support those who are seeking instruction, and not mere entertainment.

We have no objection, certainly, to public or private amusements, when properly conducted, but we are sorry to see an institution capable of conferring so much benefit upon every community where it is sustained, perverted from its high end and purpose. It does no good to complain of the managers and curators of our lyceums. They will cater to the tastes of those who elect them. The only way to restore the Institution to its true purpose, is to *elect for its management men who* WILL *make it what it should be.* Farmers and their families are interested in this matter, for they aid in sustaining the lyceum, and they should not leave its management wholly to the young men in the villages, who are too apt to prefer amusement to instruction.

Our Winter Schools commence with this month. Parents of all classes and occupations, should unite to secure for them that success which their importance demands. Where the old system of *prudential committees* is continued, the chief responsibility rests with the primary district meetings. They should appoint the most intelligent, public spirited and independent men among them, to select and aid the teacher, and make the necessary arrangements for the season. They should never elect a committee man in order that some one in the district may be employed to teach, and the money be kept in the district. This is a miserable and narrow-minded policy. As a general rule, teachers, and especially young teachers, should not teach in the district where they reside and have attended school. It was recorded as one of the experiences of human life, more than eighteen hundred years ago, that "a prophet is not without honor but in his own country, and among his own kin, and in his own house," and the experience of the eighteen hundred years since, has not shown any change in human nature, in this respect.

Notwithstanding the position and permanence given to town committees by the statutes of some States, the results of our schools must and will depend mainly upon the prudential committees. Town committees can have but a limited control over the matter, until they have the appointment of teachers. In all our larger towns, this power is put into their hands. Where this is not the case, districts should appoint men, who will not regard district limits, relationship, or any outside influences, but procure the best teachers within their reach.

When the school has commenced, see that your children are well supplied with books, and are at school every day, and *punctually* at the opening hour. To the older scholars, those whose time is most valuable at home, and whom, therefore, you are the most often tempted to keep at home to assist you, this winter is of inestimable value. Perhaps it is the last season they will attend school, and nothing but absolute necessity, should be allowed to break in upon their time, and interrupt their studies. They should be furnished with every facility, and encouraged to make the best use of their days and evenings to acquire that knowledge which can alone fit them for usefulness and respectability.

The introduction of a reasonable number of new books into schools increases the pleasure and interest of the scholars in their studies, and parents should not grudge the cost. Committees should use their best judgment in this matter, without paying any regard to the written or personal application of publishers or their agents. Encourage teachers in the discharge of their responsible duties. Visit your school occasionally, and speak a word of commendation to both teachers and pupils. In this way you may do more good than you can be aware of. The teacher who feels that he has the countenance and aid of the parents, will labor not only with more pleasure, but with more success. The teacher is doing your work for you, and he or she is certainly entitled to your support and assistance. Be sure you never throw hindrances or obstacles in his way. We have written quite a dissertation upon school management. But the subject is one of immense importance. The care of your children is of no less importance, certainly, than that of your calves and colts and lambs, and their future happiness and respectability will amply repay all your efforts in their behalf. A good education is the best investment you can make for them. It will make them not only better and more useful men, but better and more useful *farmers.* Is not this an appropriate field to cultivate in December? Does not it promise as rich returns as any field of your Summer culture? As the field crops had your earnest care, and brought you ample reward, let this, also, receive your special attention, and your reward shall be greater, even than in those.

DECEMBER. The close of the year is at hand—a fitting goal upon which to pause and reflect.

If thou hast travelled with us, kind reader, through these twelve essays, one for each Month, and hast not found the way wearisome and dull, there must now be a sympathetic chord between us. We trust that it shall not lapse into indifference, but that our mutual readings and writings shall tend to illumine all our paths, and make them paths of profit and peace.

For the New England Farmer.

PRUNING FRUIT TREES.

FRIEND BROWN:—On or about the first of last May, wishing to till a portion of my orchard, as I do every year, for the benefit of the trees, I found a few that needed pruning, which I commenced to do; but became a little suspicious that I might be doing wrong, for as soon as the first few limbs were taken off, the sap flowed from the wounds so freely that it ran down the trunk to the ground. Thinking it would soon stop, I kept on with the operation, and trimmed four or five good sized, valuable trees, considerably, and others but little. Four of the five that were trimmed the most, were Rhode Island Greenings; the other a natural, late fall apple. The wounds on the last mentioned tree did not run much at first, and soon stopped; but the Greening trees coutinued to run all summer, and have not entirely done yet. The wounds were painted over soon after they were made, but the paint did no good, soon coming off—and they have been, and some of them still are, covered with a bitter filthy gum, and the bark from the wounds downwards, in some instances to the root, is stained, or turned black, where the sap has run down, giving it a very unhealthy appearance.

On looking particularly about my orchard, last summer, with a friend, we found several trees that had been pruned, some one and some two years before—with the wounds still moist with the flowing sap; but none of them had the appearance of having flowed so profusely as those that were pruned last May. I am not certain when the last mentioned pruning was done, but presume it was in May, or the first of June, as that is the time that I have usually taken to plow my orchard, and look a little to the welfare of my fruit trees.

Now can you, or any one of your numerous correspondents, explain this matter, and show me and others, wherein I have erred, that we may do better for the future, and tell me what I shall do to save my trees? I am fearful that they cannot live; or if they do, that they cannot bear fruit with such a drain on their life-blood as they have had to sustain since they were pruned, but a few years at most, if they are not ruined already. THOMAS ELLIS.

Rochester, Mass., October, 1858.

REMARKS.—There is no doubt, whatever, on our minds, what has caused the appearance of the trees which our correspondent describes—*he pruned them at the wrong season of the year*, when the sap was in great abundance, and very thin. Nearly all the orchards in New England that are twenty-five years old and upwards, present the same appearances in greater or less degree. Our fathers were an exemplary set of gentlemen in a great many things, no doubt, but they did not know everything. They probably pruned apple trees in March and April, because it was convenient, and as they did not graft and bud, and produce as many valuable trees as we do now, they cared less if they did die, and would supply their places with another set of trees of natural fruit. But with a clearer light, their sons ought to know better than to begin to destroy their orchards just as they are coming to maturity. Many of them *do* know better, but with precisely such examples before them as Mr. ELLIS describes, still persist in the error. Well, let them do it, if they will, those who cultivate judiciously will reap the larger profits.

Who can tell Mr. Ellis how to save his beautiful trees? That is the question with him. The flowing sap from these wounds in the spring, will burst off paint, shellac, or anything else we have ever known tried. It is a disease to which we cannot minister. Who can? But we can tell you how to *prevent* it—and prevention is better than cure. Prune from the 15th of June to the 10th of July, as the best time, or in October, after the leaves have fallen.

SHIPPING APPLES TO EUROPE.—The most successful exporter of apples from this country, R. L. Pell, of Ulster County, New York, owes a considerable portion of his success to careful picking and careful handling. The fruit is picked, one apple at a time, from the tree; when transferred from the hand-basket to the larger one, only two are taken at a time by hand. These baskets are then drawn, not even on a spring wagon, but on a sled, to the building for storing, so as to secure them from jolting. When packed in barrels they are again taken two at a time by hand. They are drawn on a sled to the North River, and lifted by two men on board the steamboat, to be taken to New York and shipped. When lowered on shipboard they are caught, one at a time, on men's shoulders, and carefully carried to the coolest part of the ship. At London they are carried by two men on a hand-barrow, with the same care that we carry a costly looking-glass. With these precautions they arrive in London in better order than market apples usually reach our own cities, and having been care fully selected, sell for $10 per barrel, and some as high as $20.

THE CALIFORNIA CULTURIST.—This is the title of a monthly, published at San Francisco by Messrs. WADSWORTH & TURRELL, and edited by W. WADSWORTH. It is printed in a very high style of the art, handsomely illustrated with engravings of fruits, cattle, &c., and the articles of which it has been made up so far, are well written and upon important topics.

For the New England Farmer.

FARMING LIFE IN NEW ENGLAND.

Mr. Editor:—I have been waiting some weeks in the hope that you or some of your able correspondents would do justice to an article that appeared under the above title in the August number of the "*Atlantic Monthly.*" But I have waited in vain. The only response that I have seen, is from a lady in New Hampshire. She, justly shocked at the distorted and repulsive picture of her sex in the farm-homes of New England, far from thanking the writer for his sympathy, cries out in indignant tones, "save us from such friends." Her notice of the article affords one proof, which the editors of the "*Atlantic*" will not surely reject, that the "child-bearing women" in the farmers' homes, are not cared for less than the occupants of the "farm-yard and State," and that is, that the Monthly has found its way to Brentwood, and been read and appreciated by one of the "ceaseless ministers and servants of the home." Whether she is now enjoying a vacation, having been "for months dismissed from labor," or whether she is one of those rare exceptions, for which there is reason that "Heaven be thanked for a merciful interference with the operation of its own laws," I know not. But I should like to "look at her hands," and "look at her face." Can it be that she "secures less consideration than the pets of the stall?" But thanking her for her spirited rebuke, in behalf of our sister farmers, I will, with your consent, occupy some space in your columns, in behalf of our brother farmers.

It was with no little surprise that I read the article referred to, in the "*Atlantic*;" I was surprised and ashamed that a New England periodical of so high intellectual character, and so extensively circulated both in and out of New England, should admit into its pages an article so crowded with false views, so degrading to New England character and reputation, and tending to do so much injury to the best interest of New England. Had it appeared in some paper south of Mason and Dixon's line, in reply to some exaggerated picture of slave life, by some "northside" man, it would have been received as a matter of course.

You will permit me to say, Mr Editor, that I was mortified to find a portion of this same article quoted into the *New England Farmer*, thus giving to it your sanction and approbation so far as a quotation can give it. I am afraid that editors sometimes forget that one of the meanings of the word quote, is "to laud," "to commend," and that they inadvertently give their sanction to sentiments that they do not really approve. I think the quotation referred to must have found its way into your paper without your knowledge, for I cannot believe that you deliberately intended to give currency to notions so entirely at war with facts, and with the general tenor and style of your paper, and with the feelings and spirit of your life, merely because they were found in a popular magazine, or were written in a good style. I am disposed to give the writer all the credit he merits, and I do not hesitate to say that he has a fine command of language, and constructs his sentences with a good deal of skill. He writes with a bold hand, and in a brilliant style, and has the ability to "make the worse appear the better reason." When facts are wanting, he can readily draw upon his imagination. His article may be called good writing, and it was this, we opine, that secured it a place in the respectable journal which it disgraces.

He sets out with affirming, that "New England does not produce the bread she eats, nor the raw material of the fabrics she wears." What then? Is she not increasing in population and wealth with wonderful rapidity? Is it not to her credit, that in spite of her hard soil and rugged climate, she is increasing in all the elements of material and social prosperity? What portion of our country, indeed what portion of the world, exhibits so rapid an increase in the means of social comfort and intellectual culture as New England? And does not this increase depend upon, and afford evidence of a corresponding increase in material wealth? Do England or Belgium or Holland produce the bread they eat, or the raw material of the fabrics they wear? But will they not compare well, in wealth, in the elegancies and comforts of life, in intellectual elevation, and in all that renders life desirable, with any other parts of Europe? Why do they not produce the bread they eat, and the raw material they use? Simply because the circumstances in which they are placed, and the character of their people, afford them the means of more profitable employment—employment that furnishes bread and clothing to a population beyond the capacity of their soil to supply. Because there have been "positive advances in agricultural science, and in the means and modes of farming," will this fact change the character of New England people, or her soil and climate?

But has she not availed herself of these "advances" to a greater degree than any other portion of the country? Is it not owing to these very "advances" in a great measure at least, that she is able to sustain double the population that she did forty years ago, and that notwithstanding the immense drain upon her wealth and energies, to furnish the sinews of progress in the new States? And does she not sustain this duplicate population in a condition of much greater comfort than she did at that time? The writer evidently intends to convey the impression that the "advances in agricultural science, and the improved means and modes of farming," are generally accepted and practised by the mass of cultivators in New England, and that they are deriving from them the whole benefit which they are capable of yielding, and yet they are undergoing the process of "physical and mental deterioration." But is the impression he would convey justified by facts? If the "advantages of thorough draining are universally recognized," is thorough draining universally applied, and are New England cultivators deriving from it the benefits it is capable of affording? Has one acre in a hundred that would be benefited by the process, been subjected to it? Are "tiles everywhere for sale" at prices that bring them within reach of the mass of farmers? I am not aware that they are manufactured in more than three places in New England, viz., Whately and Manchester, Mass., and Exeter, N. H. They are also imported from Albany. But the price of freight in most parts of New England amounts to a prohibition

of their use, and to intimate that the farming lands of New England are enjoying the full advantage of thorough draining, is as preposterous as it would be to say that because the Bible has been translated into the dialect of Hindostan, and a few missionaries have been established in the peninsular, therefore the Hindoos are enjoying all the advantages that Christianity is capable of affording them. Our neat stock has been "regenerated," by "the pick and pride of foreign herds," to a much greater extent than our lands have been improved by drainage, but very much yet remains to be done even in this department. In all the departments of agriculture, I believe that the "results are" fully "commensurate with the means" actually applied. More than this, it would be absurd to expect.

But were it true that New England farmers had availed themselves of the "advances in agricultural science, and the improved means and modes of farming," that thorough draining, improved farm implements, and natural and artificial fertilizers, were universally employed—that regenerated neat stock, and Morgans and Black Hawks filled our stalls, and agricultural journals and hand books were upon every farmer's table, would not this prove that farming, so far from being deteriorated, was going forward, upon the "full tide of successful experiment?" Were this hypothesis an actuality, we should want no further witness to convict of falsehood the assertion that farming is deteriorating in New England. So far as it is an actuality, it proves that farming is advancing towards its true ends and aims.

If "the life of the New England farmer" ever has been, and still is so "widely different from what it might be and ought to be," how is it that "in the quiet evening hours," "visions of the old homestead" and the pleasant associations of early life come to the "successful merchant," the "professional men" and the "author," to "all minds that can apprehend life's true enjoyments," draped in such a costume of "rural beauty" that "the heart will breathe a sigh, and the eye drop a tear, and the voice say," "it were better so?" If even "the imagination weave the picture," the stern experiences of the past which drove them from that life, "which had nothing attractive and beautiful and good in it"—that "mean and contemptible life" all whose "economies, associations and objects were repulsive," would correct the hand of the artist, and would interweave with the warp which he had laid, a woof of dark and sombre hue, drawn from the life of the man who had there "become a beast of burden." If to the best minds in the city, in their best hours, there come such visions, accompanied with longings and resolves that "by-and-bye, in some golden hour, that life shall be enjoyed," if to such minds, there is ever present the thought, that "the farm is nearer Heaven than the street," can it be possible that the memories of the old homestead, which form the basis of such visions, are made up of scenes, and actors, and employments and motives, which have the direct tendency to depress the intellect, blunt the sensibilities, and animalize the man? Are these the memories of a life which is a "pestilent perversion," "a sale of the soul to the body," a life whose "natural and inevitable result is mental and physical deterioration?" The writer, with some vague idea of a good that has "survived the fall," attempts to account for the fact that such longings for rural life, and such visions of "the quiet scenes of nature," visit the men of the city, by referring to a "reminiscence of the first estate when man was lord of Eden." But when the Indian forms visions of a future paradise, the poet tells us, that he "dreams of abundant game, and that his faithful dog shall bear him company." He does not dream of "gorgeous palaces," nor of the luxuries or refinements of civilized life, but his imagination weaves into his web the scenes and the pleasures with which he is most familiar, and to which his heart is most strongly alive, and so it is ever, "as face answereth to face in water, so the heart of man to man." If farm life and rural scenes in New England were not remembered with pleasure, if these scenes were not peopled with loved and lovable friends, this life and these scenes would not constitute the prominent objects, the foreground in the pictures woven by the imagination, when disgusted by the monotony and frivolity of city life.

I will not attempt to follow this writer through all his vagaries. He assumes as a fact, that farm life in New England, has deteriorated, and is deteriorating, and that the cultivators in New England are undergoing a process of "both physical and mental deterioration." This state of things, which a more extended acquaintance with his subject would convince him is absolutely false and groundless, he attempts to account for, and it is not surprising that he is compelled to draw upon his imagination for facts and illustrations to sustain his position. He introduces the contrast between the two extremes of Irish life, as the basis of an illustration of the difference between farm life and city life. Had he told us in a bold and honest manner, what are the "other obvious causes" which "have had something to do" in producing this "contrast," instead of leaving us to infer that the chief causes are continued labor, and "the difference in food," he might have more satisfactorily accounted for it. The account of the farmer and the farmer's home, I must reserve for a future occasion.

For the New England Farmer.

BEEF VS. CORN.

MR. EDITOR:—I have been a constant and interested reader of the *Farmer* for seven years, and I scarcely know how I could get along without it; but from the views of some of its correspondents, I respectfully differ. I think the article by W. A. Alcott, in the *Farmer* of September 25, entitled "Corn versus Beef," does not present a fair view of the subject in all its connections, and that it would not be good economy for the farmers of New England, at least, to follow its teachings.

Domestic animals form the basis of all farm improvement, and there is a close connection between the animals a man keeps, and the crops he raises; but it would not pay to keep them simply to change food into manure, throwing the carcass away, because this or that dietetic reformer says meat is unfit for food.

The Doctor quotes a writer who says it requires ten pounds of corn to produce a pound of

beef; allowing this to be correct, but a small proportion of the beef that is slaughtered is produced by corn, much of it eating no provender at all; and cattle that are stall-fed are only finished off on corn after they have attained their full size on grass and hay. The same is also true with regard to pork, it being raised chiefly on the products of the dairy and refuse articles of the orchard and farm, until fattening time.

The doctor probably remembers the old Latin fable, which, I think, applies well to this subject; for if we cut off or refuse to feed our domestic animals, our corn and all other crops will very soon fail. This would materially change the writer's figures, and I think if the connection between corn and beef could be fairly traced out, that beef would be found an economical article of diet. Dr. Alcott says, "that no person whose taste is pure and unperverted would choose flesh for food." I should presume that the taste of a child one year old, is natural and unchanged, and I have known such to choose meat in preference to anything else. The doctor, perhaps, will say the child inherited a perverted taste.

Naturalists determine the food of animals by their teeth; they say that the teeth of man indicates a mixed diet, and we may safely follow nature, and find meat not only agreeable but healthful.

Again, as among animals, so among men, we find that the dominant races are those that eat flesh; and although the fighting principle is often carried too far, yet when properly controlled by reason, it is simply energy and force, which are necessary to success in any occupation. K.

Kennebunk, Oct. 8, 1858.

For the New England Farmer.

KILLING ROBINS.

Mr. Editor:—Mr. J. W. P. Jenks has given the public an account of the food and habits of the robin; it is all very good in the time. But, I would ask, if any bird in the same season of the year does not do a similar amount of good to the farmer and fruit-grower? Is it possible to do any injury, when the ground is in a frozen state, except to scatter seeds, injurious ones, too, which will far overbalance all the good that they may possibly do. I was much pleased to see the communication in the *Farmer* of May 1, from "J. B. R.," of Concord. I perfectly coincide with him in relation to the destruction of the robin. Self-defence is the first law of nature, and wild animals and birds, which are a positive injury to man, it is his right and duty to destroy, "Legislative enactment notwithstanding." The law forbids manslaughter, yet self-defence permits it; man's title deeds allow him the ownership of all the animals and birds, both destructive and harmless, that infest his premises, yet the law declares, that he shall suffer its penalties, if he destroys one of them. If it was the intention of the law to put an end to the wanton destruction of all birds, then the law is a just one; but if it was intended that a land-holder should harbor a band of robbers, then it is an unjust one.

Let us enumerate some of the injuries that we are every year receiving, and some of them are entailed even to the third or fourth generation of man. The destructive propensities of the robin are such, that, after doing all the damage he possibly can in the garden, by partaking, not alone, of what he may need, but by pecking at all the fair and sound fruit, commencing with the strawberry, raspberry, cherry and peach; none even of the new and choice varieties of the blackberry can be gleaned in his neighborhood, as they ripen so slowly, that his dividend is both principal and interest; after doing all this mischief in the garden, he betakes himself to the rich pasture land, and there riots in untold injuries to us. He is the enemy that sows tares when we are in the land of dreams, and our Legislative bodies are hedging him around with the impregnable barriers of the law. An enumeration of his labors in pasture land will not be inappropriate here. First he distributes the seed of low blueberry, next huckleberry, wild blackberry, barberry, savins, garget, &c. Red cedars, sweet ferns, wild cherry, are also found. This may be questioned by some; to such I would advise that they would examine their droppings, which may be abundantly found on walls, and they will find the germ of the seed is not killed in passing them. Most of the pastures in the southeast part of this county are full of ledges, or very stony at least, so much so, that it is a very serious undertaking to plow them. Mowing only aggravates the disease, causing the roots to sprout at their termini, which greatly aid the spreading of plants whose seeds have been scattered by birds. The pasturage of to-day requires two more acres for each cow than it did years ago, before legislating cost so much. Then June butter was about one-half as much in price as now, and pasturage one-third more per acre. Pasture land in my immediate neighborhood can be purchased at $25 to $30 now, formerly worth from $35 to $40. Fielding, twenty years ago, was worth $40 to $50, now the same cannot be obtained for less than from $100 to $125. Is it a wonder that milk is high and scarce, when our pastures are fast filling up with useless briers and bushes, and as rapidly deteriorating to wild wastes?

The question arises, how shall we eradicate them? If the robin destroys the larva of the curculio, when do they do it? It is not accomplished in the winter season during their absence, and in the spring their food consists almost entirely of the seeds of noxious weeds which they scatter over the gardens, and angle worms, which are nature's true subsoilers. Did the robin destroy curculios to ensure us a good fruit crop last season, or for the past three years? The robin is almost the only bird that is plenty in this vicinity, while all others are the prey of sportsmen, which should have been included in the catalogue of useful birds; if so, some good might have been done by preserving their lives. The enactment of the Legislature has been a dead letter, in my opinion, as far as the penalties are concerned. It raised up public opinion, and public opinion saved the robins, and destroyed other useful birds. J. S. Needham.

West Danvers, 1858.

How to do Good.—Dr. Johnson wisely says: "He who waits to do a great deal of good at once will never do anything. Life is made up of small

things. It is but once in an age that occasion is offered for doing a good deed. True greatness consists in being great in little things. How are railroads built? By one shovel of dirt after another; one shovel at a time. Thus, drops make the ocean. Hence, we should be willing to do a little good at a time, and never wait to do a great deal of good at once. If we would do much good in the world, we must be willing to do good in little things, little acts one after another; speaking a word here, giving a tract there, and setting a good example all the time. We must do the first thing we can, and the next, and then the next, and so keep on doing good. This is the way to accomplish anything. Thus only shall we do all the good in our power."

HOW TO GET SICK.

R. H. M. writes, "I slept in a room one night which had been washed out during the day, and was not quite dry. I awoke in the morning with a sore throat, which has continued ever since." The result is he has had to abandon his theological studies, and place himself under treatment, after having lost two years' time.

H. M. writes, "I went to sleep, in a warm day, on the top of an ice-box, and have never been well since." He shortly after died of consumption.

T. H. took a very severe cold, conversation was laborious, but he had an appointment to preach, and felt as if he must fulfil it. He made the attempt, but utterance was attended with a pricking pain in the throat, and then a dull hurting came on in the throat, with subsequent "hemming" and fruitless "clearing." He was permanently disabled.

A modest man walked until quite fatigued, and perspiring freely, entered an omnibus, and sat next a lady who opened a window to get some fresh air for herself. He soon became chilled, and was ill for three weeks.

H. P. got up at night and hoisted the window to look at a burning house; the cold air darted in on the unprotected body, just from a warm bed. A twelve-months' illness resulted in dropsy.

A strong, hearty man came in on a hot summer's day, immediately took off his coat and hat, and sat in the open window, looking out upon a beautiful garden, over which the ocean breezes came to fan him. Before he was aware of it he was chilled, was attacked with inflammation of the lungs, and died within a week.

A delicate young lady, an invalid, a patient of ours, in an excursion with several others, was "overtaken" by nightfall, and by a young gentleman. They were in a boat, and the boat was in the mud, the tide having gone out on a visit to the sea, and "there they were," a mile from shore, and several miles from home, that mile was extraordinarily long and short. Only think of it! A whole mile over a Jersey flat! covered with water, mud and bulrushes, carrying in the arms, a young eighteen, with one of the sweetest voices, faces and forms, to be in or out of Jersey. Bespattered with mud, dripping with fog, and dew, and slush, steaming with perspiration, and wearied with hunger, thirst, and fatigue, delighted and excited by the novelty of the thing, they reached home at midnight. The next day she "didn't have anything the matter with her at all!" Why? She had taken lessons of us. Instead of pulling off her bonnet and shawl, and sitting in a cool place, or instead of undressing at once, and thus letting the air check the perspiration, she went into a warm room, closed the doors and windows, sat some moments, laid aside the garments one by one, at intervals, and when cooled off, in the course of half an hour, retired to sound sleep and a healthful awaking.

Another man rode three miles with a little child sleeping in his lap, which, pressing against his stomach, caused unusual warmth there. It was a chill, raw November evening. In walking a hundred yards to the house, the child moving slowly and wind blowing, the whole abdomen was chilled in a moment. The next morning he awoke with the ominous pains of peritoneal inflammation, which is often fatal in three or four days.

A man had some accounts to draw off in midwinter. It was a cold night. He was greatly interested; time went, and the fire too. He felt a little chilly, but thought he would soon be done, and that it was not worth while to rebuild the fire. It was near one o'clock before he left for home, and he reached it most thoroughly chilled. Next morning he had pneumonia, and never got well.

Remaining at rest for hours in a cold room, in raw, cold, damp weather, is enough to kill three men out of four by bringing on congestion of the lungs, lung fever, or inflammation of the lungs. Clergymen and lawyers often sacrifice their lives by speaking in warm rooms; the body debilitated by the effort; the skin in a state of perspiration; the lungs all heated up; and thus hungry, tired and depressed in body and mind, go out into the cold air to ride or walk home—and to die in the very bloom of health and manhood. And yet, to know these little things, there are multitudes who hesitate to give a dollar a year, when on the knowledge of them, human life is daily hung, and for want of it daily lost.—*Hall's Journal of Health.*

For the New England Farmer.

POTATOES.

MR. EDITOR:—As much has been said of late about the destruction of the potato, I thought I would call attention for a moment to the means coming into use for increasing them. At the late fair at Syracuse "Potato Planters" were exhibited, which are said to save three-fourths of the labor of planting;—and I have seen in the field "Potato Diggers," the same that was pictured in your paper a few weeks since. I liked the plan of this implement very much—but it was either deficient in strength; or the laborer who guided it was deficient in skill, in the use of it. He permitted it to settle so deep in the earth, that it would not support the burden that accumulated upon it; and twice it had to be taken away for repair. When it did work, it threw out the potatoes as fast as half a dozen hands would gather them up. The maker informs me, that he is about to prepare castings, that will obviate the difficulty complained of; but I fear they will not come to hand, until after the potatoes should be in the cellar. P.

Oct. 15th, 1858.

IMPORTED DUTCH COW.

The above is an accurate illustration of a Dutch cow, imported from Holland in 1857 by Winthrop W. Chenery, Esq., of Watertown, and drawn and engraved for C. L. Flint's new work on MILCH COWS AND DAIRY FARMING, from which we derive the following notice of this celebrated dairy breed.

The Dutch is a short-horned race, which, in the opinion of many, contributed largely about a century ago, to build up the Durham or Tees-water short-horns. The latter breed was at that time frequently called Dutch.

Dairy farming in Holland became a highly important branch of farm labor at a very early date, and a large and valuable race of cattle existed there, long before the efforts of the most noted breeders began in England; dairy farming being held in the highest respect in Holland, as being the means by which a large proportion of the population is supported, it is carried to greater exactness and perfection than in any other part of the world. The Dutch are especially particular in the breeding, keeping and care of milch cows, and hence the Dutch, as a race, is eminently adapted to the dairy. The Dutch cow may indeed be taken as the type of a truly dairy *race*. She usually unites all the marks which indicate the production of milk, and is superior to the Swiss cow in her yield. She is, perhaps, a little too thin-skinned, and subject to annoyance from insects and sudden changes of weather.

The Dutch cow eats largely in proportion to her size, but will often produce double the cost of keeping in her large and generous yield.

The prevailing color of the Dutch cattle is black and white, but often red and white, variegated. Cattle of only one color are no favorites. The Dutch cattle laid the foundation of the native or common stock of New York, and to this day a cross with the short-horn and Dutch is regarded there as one of the most desirable for cheese dairies.

For the New England Farmer.

ROOT CROPS.

MR. EDITOR:—I have long promised myself that I would communicate, through the *New England Farmer*, my experience the last winter, in feeding English turnips to stock.

In the autumn of 1857, I raised from among my corn four hundred and fifty bushels of English flat turnips; these, I commenced feeding to my stock early in the month of November, together with wheat straw, and from the time of my first feeding, those of my young cattle, composed of two and three years old, had no other fodder than the turnips and wheat straw, until after the fifth of the next March, at which time they were in fair beef condition. The expense of raising and harvesting these turnips did not exceed three cents a bushel; and the additional cost of feeding roots, to stock, if a root-cutter is used, is very little. I feel perfectly confident that the statement made in your letter from Newport, N. H., in the October number of the *Farmer*, "that the farmers of New England, with little or no more labor upon their farms, can double their capacity for keeping stock by the gradual introduction of root crops"—is perfectly true. And I would earnestly urge our farmers to imitate this well-tested system of husbandry, so long practised by English agriculturists.

DANIEL NEEDHAM.

Hartford, Vt., Oct. 11th, 1858.

LETTER FROM MR. BROWN.

A Talk with the Farmers on the Results of Intelligent Labor—Lancaster a Beautiful Town—Old Elms—Thoughts Suggested—A Good Farm—New Modes of Preparing Roots for Cattle—A Milk-Room—A Well-Balanced Family.

Lancaster, Mass., Oct. 15, 1858.

DEAR SIR :—I came to this place yesterday by invitation of the *Farmers' Club* of this town, to talk with the people upon agricultural matters, and to take a look at some of the farms lying upon the banks of the Nashua river. The meeting took place in the Town Hall last evening, where a numerous and exceedingly attentive audience was present. The subject discussed was —"*The results of Intelligent Labor, and the Influences of Farming, as an Occupation, upon the Social Relations of the Family.*"

This forenoon I had opportunity to ride through some of the streets of this beautiful old town, look at the substantial residences which line them, with their noble elms, ash, and maple trees,—

"And I said, if there's peace to be found in the world,
The heart that is humble may sure find it here."

I doubt whether the wide world can produce out of New England such perfect little Republics as the rural villlages which stud this rough region in every direction. Rich gems in themselves, but a thousand times richer for the rugged surroundings in which they are set. What can man ask for more? Blest with a congenial climate; plenty rewards his labor; all his rights protected and his person secure under temperate and equal laws; quick and remunerating markets for his products; the school, academy and college at his door, and the sound of the "church-going bell," sweetly pealing over hill and valley, forest and field, reminding each that the Sabbath has come when they may commune together, and more directly and earnestly lift the heart's gratitude to Him who sends the early and the latter rain, and crowns the year with His goodness. But this is not all. Wide avenues stand open for him to go out and see all the world,—while all the world comes daily to him in the morning paper; he curbs the elements and makes them subserve his will, and sends the lightning along horizontal lines, with messages of love, or the results of negotiation, arbitration, or trade, as he pleases. All artisans and tradesmen, and professions, and cunning workmen in all things stand ready to do his bidding. He needs but one thing,—*To be Contented.* Such were my thoughts as I rode under ancient elms, whose branches, spreading over my head, formed an arch more grand and imposing than ever graced ovation to Roman conqueror. But they are passed now, and I must tell you about these green meadows on Nashua's banks, and the villas or homesteads to which they belong.

It was my good fortune to "tie up," for the night, with Dea. CHARLES HUMPHREY, a social, intelligent and progressive farmer, wide awake to his own interests, but having a heart and hand to assist in making the world agreeable to all coming within his influence. I have rarely walked through a set of farm buildings, or over a farm, with more interest and profit than his. He will winter forty head of cattle, all ranged on the south side of the basement story of his barn, with wide rolling doors at each end, set with glass to admit light and air. They are tied with chains to common stancheons, which gives them so much room as to allow them to lick each other, and to change their position considerably. In front of them, and coming down to within two feet of the floor, is a rack for feeding hay, much the same as one used for feeding horses, and into which the hay is fed from the barn-floor above. The two foot space below the rack is left for the purpose of sliding under a half barrel, from which the cattle eat roots, &c. Opposite the cattle, and about the centre of a narrow room some 80 ft. long, a sixty gallon kettle is set, and immediately over its edge and around the kettle 80 feet of iron pipe is coiled in brickwork, with apertures to admit the water from the kettle to touch them.

Near this kettle is a brickwork cistern, in the upper part of which is a trough for cooling milk in cans, both of which are supplied with pure spring water passing in by an aqueduct, the water flowing over from the milk cooler, when full, into the cistern. The kettle is lower, and within three feet of the cistern, so that the pipe around it is always supplied with water by its own gravity. Into this kettle are thrown apples, roots of all kinds, pumpkins, &c., and boiled rapidly and cheaply, and are then passed through a small mill placed over a trough, into which they fall a perfect *mash.*

Hot or cold water may be admitted by turning a cock, to bring the mass to a proper state of dilution and temperature, when, a little corn meal being added, it is fed about four pails full, night and morning, to each cow. This is given them immediately after being milked; then they are fed with long hay, as much as they will eat with a good appetite, and this is the bill of fare for the whole winter. The cows have little or no water beside this, and are only turned into the yard occasionally, during the middle of bright, soft weather.

Mr. Humphrey says that under this regimen his cows continue healthy, and yield a satisfactory flow of excellent milk. He sells from 30 to 40 gallons of milk, daily, at Clinton, at five cents a quart in winter and four cents in the summer.

In another portion of the same basement, is

a room for setting milk to raise the cream. It is about eight feet wide and fifteen long. On each side are firm plank shelves with strips on the edges so as to make them water-tight. Into these large but shallow tin pans are set, and during hot weather cold water is admitted by a cock, and when the temperature is too low, hot water is supplied by the same means. The bottom of the cellar is brick and cement, and in very hot weather the whole floor is flooded with pure, cold, spring water. The milk remains sweet two or three days in this room and 7½ and 8 quarts will make a pound of the best butter. Beside this room, there are in this basement, capacious rooms for roots, one to store *a hundred ox loads of muck* for winter use, and racks, and conveniences for cows in calf. This lower story is unique —it is certainly unlike anything of the kind I ever saw before, and it will not fail to afford valuable suggestions to all persons who visit it, and who are engaged in producing milk for market.

Connected with the barn I found a cider mill of new construction, where the apples can be ground and a barrel of cider made in two hours; also a thresher, a saw for sawing wood at the rate of a cord an hour, a paint mill, a large and commodious workshop, with proper tools, and many contrivances indicating skill in all sorts of handicraft as well as in cultivating the soil. I saw many other things on this farm that interested me unusually, but as my letter is getting long, I must defer them to another time. I have never before met a man who comes up so nearly to my ideas of the value and importance of *muck as a fertilizer* as does Mr. Humphrey. He warmed into eloquence in expatiating upon its virtues; and well he might, for he has gathered harvests of glittering gold through its influence, on land that he would gladly have sold a few years since for $5 an acre! But all this, together with his experience with mowing machines, and his success in the propagation of trout, I must for the present omit.

The most charming part of my visit, however, was not derived from these things, but from the manners and conversation of the well-balanced family into which I was thrown. It was refined, harmonious, intelligent; the daughters, as well as the sons, engaging freely in a conversation relating entirely to the affairs of the farm, and giving ample evidence that they had resolved to "magnify their office" to the extent of their ability. But I must desist,

Very truly, yours, SIMON BROWN.

JOEL NOURSE, ESQ., BOSTON.

A FINE HEIFER.—Mr. JOSIAH A. WYMAN, of Chelmsford, Mass., has a beautiful pure Durham heifer, three years old in November next, estimated to weigh 950 pounds. She calved the first day of September—the calf sucked four days, and she has averaged 13 quarts of milk per day since. He has refused $100 for her. B.

For the New England Farmer.

"FARMING LIFE IN NEW ENGLAND."

"We would by no means compare New England farmers with the Irish peasantry." Indeed! "But if we enter a church containing a strictly rural assembly, and then visit another containing a class whose labor is lighter," "we shall see a contrast, less marked perhaps, but presenting similar features." Then it is not quite certain that the "contrast" between the rural and city population is "less marked," than that between the "Irish peasantry," and the "Irish gentlemen." There is room for a "perhaps." "The forms of both men and women are angular, their features are not particularly intellectual, their movements are not graceful."

When La Fayette visited this country, in 1826 we think it was, he visited several of the country towns; among the rest a farming town in the north part of Worcester county. An artillery company, composed almost wholly of farmers, turned out to do honor to the veteran soldier and statesman. After looking at their manœuvres for a few moments, he remarked to a gentleman by his side, "that is the finest company of men I ever saw." He had an eye for the "forms of men." He had seen a variety of "forms of men," and their "movements." But as at that period he had been residing for years at his chateau in the country, perhaps he had become partial to the farmer's "forms" and "movements." At any rate, he did not seem to be aware of the fact that the "city assemblage is composed of a finer and higher grade of men, women and children." Now, as the "city comes from the country," it is surprising how rapidly this transformation takes place. When relieved from labor, life rises at once to a "higher grade," as the spring rebounds when the weight is removed that pressed it down. Men and women of finer and higher grade! Yes, if "the tailor makes the man," they may be. But if health and vigor, intelligence and self-reliant industry, independence, integrity and honesty, make the man, then we deny the assertion altogether. "But the city children going back to the farm, show that a new element has been introduced into their blood." Yes, an element of feebleness, frivolity and selfishness. If these show "in every way a finer development," then they undoubtedly possess it.

Where has this writer spent his life? In what aristocratic "bower of ease" has he been taught to look back with contempt, upon the source from whence he sprung? We should suppose that he were still a sophomore, or at least, that he had just graduated, with the notion so common among young students, that he is of "a finer and higher grade" than other men, and that he had not lived long enough to correct the mistake. Where would any man in his senses look for fair, blooming, well developed, healthy, happy children, capable of caring for themselves, and lending a generous aid to the feeble and the needy, but among the boys and girls who have breathed

the bracing air, and had the free range of the hills of New England? Would he seek them by gas light, in the narrow lanes, the dark avenues, or the crowded streets of the city? Where do our city merchants find the healthful, blooming women, whom they transport to the city, and to whom they render the "homage of their hearts," and who may "introduce a new element into the blood of their children?" Were it not for the constant infusion of this "new element," the city children would be compelled to "go back to the farm" to recruit their feeble frames and decaying energies, more frequently than they do now. Where were the Hawleys, the Knoxes, the Putnams, the Starks, the Greens, the Sullivans, and even Washington, raised? Did Cromwell and Napoleon have their root in the pavement? And where did Clay, and Webster, and Calhoun, and Corwin, and Cass, first see the light? Do their mothers afford instances in which "Heaven mercifully interfered with the operation of its own laws?" Will the "hands" and "faces" and "bowed and clumsy forms" of their mothers compare with those of city dames? Are there no bowed frames and angular forms and "features that are not particularly intellectual" to be seen in the "streets?" We know that such "comparisons are invidious." There are men and women in both city and country, whose forms are angular, whose features are stolid, and whose frames are bowed by disease, by care and by labor. But we contend that the country exhibits its full proportion of health and beauty, intelligence and grace. If the farmer's wife, discharging her appropriate duties in the kitchen, is clothed in a garb appropriate to her work, if the farmer himself does not go to market clothed in broadcloth, if his face is browned by the weather, and his hands are hardened by toil, does this prove that they belong to an inferior grade of humanity? Apply to them the test of womanhood or manhood. Appeal to their hearts, to their conscience, their integrity, their love of honest independence, their intelligence, to all the virtues that constitute the true men, or the true women, and will they be found inferior to those who toil in the counting-room, or in the dust and smoke of the mechanic's shop?

But "the farmer's home," the "sketch." In what part of the country did he draw this "sketch?" In what remote corner of New England, where the hum of the factory or the whistle of the engine was never heard, did he find this home? We do not deny that there are relics of the olden time, venerable for their antiquity, which bear some resemblance, in their external appearance, to the "sketch." But are they the types and representatives of the homes of the living New England farmers of to-day? We would as soon think of calling the "one hoss shay," built by the logical deacon, a hundred years ago, adorned in front and all around by rows of burnished brass nails, a type of the vehicles of the present time. As to the internal arrangement and style of life which are said to present themselves, when "we enter by the back door," we think we should look in vain for them anywhere except in the "sketch," even in a "square brown house," unless it were occupied by "Irish peasantry." It is true that there is much room for improvement in many of the "farm homes" of New England. Many of them exhibit a sad want of taste in their surroundings. But a want of taste is not a want of truth, and we ask in all soberness, is this a truthful "sketch" of the farm houses of New England? In what "lodge in some vast wilderness" does this man dwell? Go through the length and breadth of the land, visit the hills and valleys of New England. Ask our county officers—the committees of our agricultural societies, on farms and orchards, who visit the farms, and are entertained at the homes of the farmers. Some of these men have been in the city. Some of them reside there a part of the year, and are participants of both city and country life. Ask them if the farmers "receive their friends" in the kitchen, where "a kettle of soap-grease is standing upon the stove, and its fumes are mingling with the boiling cabbage, and other smells, anything but agreeable?" Ask them if "the men and women, the sons and daughters" which they have met in their annual visits, "go so far into essential self-debasement, as to condemn beauty, and those who love it, and to glory above all things, in brute strength, and brute endurance?" Where do they find more intelligent, high-minded and honorable men? Where do they find women of more beautiful forms, and "look upon faces" more fair? Where have they mingled in conversation more agreeable and more intellectual? Where have they been entertained at tables more bountifully, not to say more tastefully spread? And more, where have they "looked upon hands" that have wrought more beautiful specimens of needle work or painting? Where have they heard sweeter voices, or more delightful strains of music? Where have they found, in most generous abundance, the comforts and conveniences of home, and added to these, an ample store of the elegancies and luxuries of life? Now we do not say that this is a picture of farm life, as it is commonly found in New England. But we do say that the picture is more truthful, and more frequent at the present day, than the "sketch," which is held up as a type of farm life.

The tendency of the present time is to copy and multiply the picture which we have drawn, and many of its features are found in almost every farm home, while the "sketch," if it were ever true to life, has been a relic of antiquity for half a century. We would recommend to the artist to present his study of ancient ruins to the State Antiquarian Society. We think the gift should entitle him to membership.

But "the real reason for the deterioration of agriculture in New England." The "deterioration of agriculture" again. Now we wholly and absolutely deny that any such "deterioration" exists. It is a false assumption without any proof. Let us look a little into the detail. In the State of New York there are 58,000 fewer cows than there were fifteen years ago. And yet the increase in cheese is 12,991,437 pounds, and of butter 264,361 pounds, worth together $1,202,580. Now if the farmers can sell 58,000 cows, and pocket the money and save the keeping of the cows, and yet their dairy products be increased by more than $1,200,000, is there a deterioration in stock husbandry? Throughout New England quite as great a change has taken place in this department of farming. Owing to the introduction of the "pick and pride of foreign herds," and to more skilful management, the value of cows and oxen

is nearly or quite twice as much as it was twenty-five years ago. The sheep in Vermont yield two pounds of wool, where they yielded one, twenty years ago, and that of better quality. And are not the Morgans and Black Hawks an improvement upon the old ewe necked breed of New England horses? And have not swine fully kept pace in improvement, with other farm stock? The grass lands in Massachusetts yield two tons, where they formerly yielded one. And this is one very important reason of the increased value of farm stock.

In corn culture, our farmers harvest at least twenty-five per cent. an acre more than formerly. If they do not raise as many potatoes per acre as they once did, it is owing to causes beyond their control, like the diseases, that at certain periods attack certain families of trees, as the buttonwood, the peach, &c. But if the quantity of potatoes per acre has diminished, the price has increased, and been sustained by the demand of the foreign population, and the income to the farmer from this crop has been greater, during the few years past, than ever before. And is not the quantity of fruit greatly increased, and its quality improved? But, it will be said, the quantity of grain rasied in New England has diminished. The agriculture of New England has doubtless undergone some changes. The habits of our people have changed. They now consume a much greater amount and variety of vegetable food than formerly, and farm culture has changed to meet the demand occasioned by this change in the habits of living. In the vicinity of all our cities and manufacturing towns, fields that were once covered with rye and corn, are cut up into streets and building lots, or covered with buildings and gardens. The culture of fruit and vegetables for the supply of the market in these towns, is much more profitable than the culture of grain. One of my neighbors raised this season, on one acre and a quarter, one hundred and sixty barrels of marrow squashes, worth one dollar the barrel.

Here was twice the amount which this land would have yielded in corn. But has there been, in this case, a "deterioration in agriculture?" Farm lands which might have been purchased thirty or forty years ago for thirty dollars an acre, have been sold for three and even five hundred dollars for the cultivation of market vegetables. Does this prove deterioration? The truth is that in many parts of New England, farmers cannot afford to raise corn, or even to pasture cows for butter. It is better economy for them to purchase corn and butter, and appropriate their lands to other uses. Does this prove bad husbandry? If so, every man who engages in a more profitable business than he has been pursuing, is a bad husband. Whence has come the great increase of taxable property in the farming towns and villages? Whence have sprung up all over our hills and valleys, neat, convenient and tasteful dwelling-houses? How comes it that they are filled with better furniture and many more conveniences, than they were a few years ago? Whence have sprung up the large and elegant barns, with spacious cellars, that have taken the place of the small and inconvenient barns of the past? How is it that farming population is better clothed and better fed—that they have better school-houses, and annually spend large sums for the education of their children? How is it that books and papers and periodicals are found in every farmer's family? How is it that the farmers are able to employ foreign laborers, both in the house and field, and educate their own sons and daughters to teach the schools of the cities, to fill their pulpits and adorn their legal tribunals? Whence have thousands of farmers' sons obtained the means to secure future homes on the broad prairies of the West, or to gratify the love of enterprise or fondness for roaming, by visiting the El Dorados of the world? The sums thus carried from the farm homes within a few years past, would go far to pay for all the farms of New England, as they were in the past generation. Does all this prove the deterioration of agriculture?

As we deny the position which the writer takes so much pains to prove, we have nothing to do with the reasons by which he attempts to prove it. But one word with respect to "the position of the mother in the New England farm homes." "Is not she who should receive the tenderest and most considerate ministries of the farmer's home, in all its appointments, and all its service, made the ceaseless minister and servant of the home and all within it, with utter disregard of her office?" Shame, shame on the man who can so dishonor the soil that feeds him. If any woman in any home is completely mistress of "all its appointments," and all its "service," and of all "within it," it is the beloved and virtuous mother in the New England farmer's home. It is true that New England mothers are "ceaseless ministers" to those around them. They are ever anxious about the objects of their love. Their affection takes that active form that demands an object to love and care for. Like Martha of old, they are "careful and troubled about many things." But this is no more true of the mothers in farmers' homes, than in other homes. It is characteristic of New England mothers, and their husbands are not good easy souls, letting things go their own way, and taking the world easy. New England men and women both are characterized by incessant anxiety and ceaseless care for the objects of their affection or pursuit. Careful and anxious fathers and mothers are they. But it is a constitutional trait and belongs to the race. If the New England mother assumes the office of "ceaseless minister" to her children, it is because she is impelled to it by an anxious, loving heart, and not because her affectionate service does not secure for her "more consideration than the pets of the stall." We are sorry that so able a writer does not read human nature more correctly, or understand better the character of his own countrymen.

But, Mr. Editor, we are taking up quite too much of your space, and will speak of only one more point before we close, and that is the "isolation" of farm life, and here we will be brief. "The tree which springs in the open field, though it be fed by the juices of a rood, will present a hard and stunted growth, while the little sapling of the forest seeking for life among a million roots, will lift to the light its cap of leaves upon a graceful stem, and whisper even-headed with the stateliest of its neighbors." Yes, and the whisper will ever be, "I am even-headed with my

neighbors;" and to gain this even level is the struggle of its whole life. Its "cap of leaves" is borne upon a naked bole. It throws out no sturdy arms laden with fruit and foliage, yielding shelter and nourishment to "the beasts of the field and the fowls of the air." It is like its neighbors. It has no individual character. Who ever looks for a tree of the "first-class" in the forest? Did the "autocrat" ever put his "wedding-ring" on such a tree? Did his heart "ever stop short and then jump in his ribs," when he looked on such a tree? It is the tree occupying a "rood" that "lifts in Olympian majesty and imperial supremacy" "its great green cloud" of foliage. When did the tree which "seeks for life among a million roots" ever spread its symmetrical branches over a "diameter of a hundred feet? The "autocrat" certainly exhibits the most extensive and accurate knowledge of the natural history of trees, even of the trees of the river towns, and of their individual character, as they stand "alone in their glory." And when "somebody" publishes his photographs of New England elms and other trees," we shall have additional evidence that trees which grow up in "isolation" have not therefore a hard and stunted growth. We present this illustration of one of the reasons of the "deterioration of agriculture" as a fair sample of the writer's correctness in the observation of facts. It is a good specimen of his accuracy, and quite as reliable as any other "sketch" he has drawn. The inferences which he deduces from his facts, are worth as much and no more than the facts themselves, and indicate a judgment equalled only by his power of observation. Had not this outrage upon New England character been found in company that gives it credit and currency, we would not have troubled you with these remarks. R.

Oct. 15.

For the New England Farmer.

REFLECTING LIGHT INTO A WELL.

MR. EDITOR:—I recently noticed in your columns the old story revived of looking into wells by a looking-glass, which carried my mind back some twenty-three years. When standing in Dr. Bond's well, in Waltham, the well being about thirty-six feet deep, and had six feet of water in it, after connecting the pipe by soldering, to lead the water from it into a house, and while gathering up my tools, a valuable jackknife slipt from my hands to the bottom. I looked wishfully after it till it struck the water, then it was out of sight, and I knew just as well where it was as though it had been in my pocket. While standing on the stoning, some ten feet down, I resolved that I must have it, but how to get it was the knotty question. I bethought myself as being once a rogue in school, playing with a piece of looking-glass, reflecting the sun's light on the walls and ceiling of the room, to attract the little rogues like myself. While reflecting, and the sun shining, philosophy told me that he would show me where the knife lay. The water being clear, a mirror was brought, the experiment made, and the knife brought clearly to view under six feet of water. Here was the treasure in sight. What next? Perseverance said—get a hoe, splice out the handle, lower it down and work it under the knife, at the same time the man above reflecting the sun's light upon it. This being done, the object of search was brought up within eight inches of the surface, when it glided off and went to the bottom again; this was tried over again, and the same result. But a third time secured it by thrusting the arm into the water and meeting the knife before it came to the surface.

This was the first practical application of my early discovery of reflecting light, and was of great worth to me, when in the pump business. Not only was it useful to me where the sun shone over the well, but I could reflect from one mirror to another into any room, down any well, through any tunnel or into any pump, and see the inside of anything as well as the outside.

Boston, Oct., 1858. S. A.

MILK FROM SPAYED COWS—INTERESTING TO DAIRYMEN.

It is known to all our dairymen, that the milk of cows varies greatly. In a period when the cows are in heat, the milk is very unhealthy and injurious to other milk in contact with it. The milk of cows, for a time after calving, is also not as good as at a subsequent period. A French gentleman, "Delamarre," proprietor of a milk establishment in Paris, gives the following account of

THE MILK OF SPAYED COWS.

This milk is produced from cows which, after the fifth or sixth gestation, and five or six weeks after calving, undergo an operation which consists in the removal of the ovaries, thus rendering the cows, henceforth, incapable of re-production. From this time, as happens to the ox, the animal changes in its nature, and its milk, which we have named milk of spayed cows, is free from all perturbations. The spayed cow does not undergo those disturbances arising from being in heat, from gestation, and perturbation, she is free from those causes which produce such effects in the quality of the milk.

In this new condition her milk becomes regulated, and, which is important to the farmer, lactation is maintained in full quantity, for a year at least, and is prolonged, diminishing in quantity but increasing in quality, two and even three years, when she is not too old, and is properly kept. When lactation has ceased, the cow, which has by a quiet and reposed life become considerably increased in flesh, may be delivered to the butcher in perfect condition, and the meat is superior to that of ordinary cows. By generalizing the spaying of cows, after the fifth or sixth gestation, there would be introduced into common use milk of an irreproachable quality.

The spaying of cows was known in remote antiquity. In modern times the practice dates back about twenty-five years, with the design to increase the quality of milk in cows. In 1830, Mr. Winn, Natchez, Miss., applied it with advantage in the production of milk. Mr. Winn proceeded by the cesarian operation, which is still pursued in the United States, but it presents serious difficulties, resulting occasionally in the death of the animal. In France, M. Charlier, Veterinary Surgeon, executes the operation without external in-

cision, and renders the chances of mortality much less.

The milk of spayed cows gives more cream than ordinary milk; it is also richer in casein, which constitutes—a fact generally unknown—the most nourishing part of milk—hence the superior quality of the milk. The butter extracted directly from the milk is delicious in taste; it testifies to the amount and richness of the casein it contains. This milk offers precious resources for the artificial raising of infants; it might be asserted that they will be better nourished; for the nourishment of infants, who give it the preference over other milk, we do not doubt that the milk of spayed cows will be principally used.

Such is the milk introduced by M. Delamarre at his establishment for consumption. — *Ohio Farmer.*

THE FLAIL.

BY ANNA L. ANGIER.

A song for the flail! the smooth handled flail,
As stroke after stroke it comes down;
While the golden grains fly, wheat, barley or rye,
The toil of the farmer to crown.

The useful and useless he thus will divide;
And gathering each in its turn,
The former with care, for the garner prepare,
The latter he'll scatter or burn.

And what is earth more than a great threshing floor—
With the wrong and the right thickly strown?
But Truth's iron flail, them both shall assail;
To the winds then shall falsehood be thrown.

Boston Recorder.

MASS. STATE BOARD OF AGRICULTURE.

A quarterly meeting of the State Board of Agriculture was holden at the farm at Westboro', on the 18th October, the *Superintending Committee* having been in session the previous day. Nearly all the members were present. The discussions were animated, harmonious and instructive. In that on *The Potato Rot*, the opinion seemed to prevail, *that insects* ARE NOT *the prime cause of the disease*, but that they are usually attendant upon it. Numerous experiments have been gone through with on the farm during the season just closed, which have been conducted with accuracy and care, whose results indicate that nothing has yet come to the knowledge of the Board, that will certainly prevent the disease. Indeed, in some of the experiments, where remedies had been recommended with the utmost confidence, the disease seemed to revel with unusual virulence and power.

In connection with this subject, the opinion as expressed, was general, that potatoes succeed the best on new land,—that is, on land newly broken, whether just reclaimed or broken pastures or mowing fields. Mr. LATHROP, of South Hadley, said he had known potatoes repeatedly to fail when planted on the same land for three successive years.

The discussion "*On the use of Guano*" was highly interesting,—but the views of the speakers were various. We could see that there was no unanimity of opinion that guano would invariably prove useful to hoed or grain crops, but that on grass lands where *humus* is annually supplied in the second growth of grass which dies and decays on the ground, absorbing and holding the guano, it can be universally employed with confidence, and may be expected to produce profitable results. On this subject, Col. WILDER observed that he had known mowing fields sustained for *eight successive years* in producing heavy crops, with no other fertilizer supplied by man but guano.

The importance of the means for a *more systematic education* for those who mean to make farming an avocation, was earnestly discussed, and it was evident that the Board believes it a duty to give this point more direct attention hereafter. Mr. SWEETSER, of Amherst, sustained his opinions in brief, but appropriate and forcible remarks.

In the course of business matters it was "*Voted*, That the Board of Agriculture do not contemplate renewing the contract for the management of the State Farm at Westboro', and now notify the Trustees of their decision."

We learn that there were several reasons five years ago for transferring the farm to the care of the Board of Agriculture, and among the principal of which was that of relieving the Trustees from the care of employing the boys on the land under the immediate care of competent overseers and instructors. Under a new arrangement of the Board of Trustees, however, all the boys who are of sufficient age and ability, and who can be entrusted on the farm, are now employed upon it during suitable weather, *under the care of their own teachers in the schools.* This plan has been found to work admirably, and has already been attended with the most beneficial results. The Board of Agriculture also found its field of operations somewhat restricted by the connection, and the cost of managing the farm considerably increased by the necessity of keeping minute and extended accounts, and the unavoidable intermingling of the business of the two Boards. Having, therefore, a wider field of action in view, and the term having nearly expired for which they contracted, they gave notice to the Trustees at this early day—the contract expiring in April next—in order that they may have ample time to arrange for next spring's operations.

One step taken towards carrying out the new views of the Board, was the appointment of a committee to consider and report at the annual meeting in January next, a plan of operations of the Board for the ensuing year. Dr. JOHN C.

BARTLETT, of Chelmsford, is Chairman of this committee, and aided by his intelligent associates, they will undoubtedly present a lucid and practical outline of business.

We hope, now that the Board is about relinquishing its charge of the farm, that it will devote a chapter in its next volume of Transactions to a full account of the experiments and improvements which have been conducted under its control. We are confident that in each of these, more has been done, and more important results have been obtained, than our people are aware of; it is due to the Board, that its labors may be appreciated, and the people desire it, that they may profit by the example given them.

For the New England Farmer.

CAUSE AND CURE OF THE POTATO ROT.

MR. EDITOR:—I have read with much interest the articles which have lately appeared in the *Farmer* on the above-named subject—one copied from the *Scientific American*, one from Mr. Reed, the patentee, and another from the veteran Mr. Proctor, the——sceptic! My interest in the two first articles was increased, from the fact that they spoke with a confidence characteristic of an "assurance doubly sure." Can we even suspect that it is not the true theory, when so much science, time and labor have been devoted to it, and that we shall not hereafter be able to raise a plenty of sound potatoes, whether we purchase Mr. Reed's patent right, or adopt Mr. Henderson's gratuitous method of sprinkling the seed with quicklime, or of planting deep? And in this connection I cannot but observe, that Mr. Reed can have but little faith in Mr. Henderson's *remedy*, else he would not be so unwise as to patent his own remedy when no further means of prevention were needed; or that the public would purchase his right unless they thought it the sole preventive. And do not these gentlemen differ in regard to the identity of the depredating insect? I find mentioned the "*Aphis Vastator*," the "*Phytocoris Linealaris*," the "*Capris Obliniatus*," and the "*Alphis*." Are these identical, all having "brilliant black eyes?"

For the last few years the potato has rotted badly, but not because there were no published remedies. Each last new antidote has been regarded, by its promulgator, as the certain one; but before he can justly appreciate his great discovery, there comes the conviction that it is futile, and his "blushing honors" immediately vanish. Let us not be

"Unskilled to judge the future by the past,"

but require actual demonstration, for a series of years (if not falsified before,) of any new theory in relation to the cause and remedy of the potato rot.

In relation to the Messrs. Henderson and Reed's new insect theory, I am reminded that "Honest doubt is the beacon of the wise." Nevertheless, every man, who is not already convinced of its falsity, is under obligation to test it. There are many diseases incident to the human system, for which we have no actual remedy, but merely palliatives; and even they, in many cases, can hardly be called such. The Asiatic cholera, fevers, &c., are some of them. We may never know the cause or remedy of this potato disease, yet it may in time mysteriously disappear.

It would seem from the article from the *Scientific American*, that one remedy for the evil is to plant deep, thereby preventing light and air from coming to the delicate eggs, though the growth of the tuber requires air. If such is the case, I cannot see how the rot reaches the new tubers lying *deep* in the hill, and as frequently leaving those sound *near the surface*—which fact I have particularly noticed since reading the above-named articles. If the deepest planted are affected, how much more should the surface ones suffer! The application of quicklime to the seed is another published remedy of Mr. Henderson, with a view of killing the eggs. (How would scalding water do?) I have not tried pure caustic lime as yet, but I *always* sprinkle air-slaked lime, in a somewhat imperfect or lumpy condition, on my seedling tubers, and it seems to give no protection.

It is generally believed that on upland new soils, with but little manure, the potato enjoys the greatest immunity from the rot; but if the embryo insect is adhering to the seedling tuber, and feeds upon it and its products, when it becomes developed, why cannot he make as sad havoc in this position as in any other? The potato disease, it is well known, is some years more virulent than in others, also varying in different sections of the country—which is perfectly in harmony with the atmospheric theory. But can it be so on the insect hypothesis? Sometimes, also, very early varieties escape; and the very late-growing are only injured. Can the cause of this be made clear on the insect presumption? Again, if the potato is the food upon which these bugs feed, what can we think of that instinct which leads them to poison and destroy it?

Why do peaches and plums rot early in great quantities on the trees? Is this caused by an insect, or by the peculiar state of the atmosphere acting upon objects of easy decomposition? What causes vegetable decay in general? And if insects of some kind are found, by the aid of the microscope, in all incipient decomposition, does it prove they cause it?

Some time last winter or spring, Mr. Sheldon, of Wilmington, Ms., (a very zealous and worthy farmer,) published a communication in this paper, and also in the *Boston Cultivator*, claiming the State award of $10,000, on the conviction that he had discovered the remedy for the potato disease, in keeping the tubers intended for the next planting from the light and air. This *may* be a remedy; but I have seen no allusions made to it from any other source. If Mr. Sheldon can raise round potatoes without the use of lime or deep planting, or without purchasing Mr. Reed's patent antidote, he is a fortunate man—much more, probably, than the rest of mankind with them all!

I think, also, a gentleman of Essex Co., during the past summer, has stated in the *New England Farmer*, that an oyster shell placed within the hill is a preventive of the rot! This gentleman probably cherishes but very little respect for the entomological speculation of Messrs. Henderson and Reed, or of the underground remedy

of Mr. Sheldon. His specific is a simple oyster-shell; but it is not mine, for I have within a few days seen several hills containing rotten potatoes in close contiguity with this crustaceous protector!

Mr. Lyman Reed, in his communication speaks with great confidence in his remedy; but I apprehend the farmer's confidence in his antidote will be signally feeble when he learns that he is "prepared to dispose of rights to use the remedy." With Mr. Proctor, I must yet remain—sceptical!

West Medford, Oct. 10, 1858. D. W. L.

For the New England Farmer.

BOOK KNOWLEDGE VS. EXPERIENCE—SALTING PLUM TREES.

MR. EDITOR:—I read the "*Farmer*" with much interest. I have been wont to place confidence in its teachings, but my faith is waning; I am feeling more and more every season, that we know nothing until we learn it by actual experience. For an illustration, I refer to one instance now. I have read again and again in the *Farmer*, that salt was good for plum trees. In the July number, 1856, of the monthly, there is an article by "Norfolk," on the "Treatment of Plum Trees." I had in the spring a number of fine growing trees. Some were grafted the year previous and were doing very well. But not satisfied with "doing well," I wished to "do better." So I made what I suppose Norfolk would call a "free use" of salt, and the result is, what trees are not dead outright, are stationary,—have not grown any, neither produced fruit.

From my experience, I venture the assertion that with the "free use of salt," I can kill in one month, at a given period, every plum tree which "Norfolk" owns, or anybody else, for that matter. I have yet to be convinced that any amount of salt, ever so prudently used, is of any service to plum trees. Still the presumption is that small quantities may be of utility. But if the indiscriminate use is liable to be followed by such results as I have witnessed, in the case of my own trees, ought not more caution to be used in recommending the application of "salt freely to the roots of the tree?" If I wanted to kill my trees this would be the course I would pursue.

I have sometimes felt, as I have looked upon my lost plum trees, that the friend whose advice I was fool enough to follow in killing them, ought to be informed of the result, and so I have written these lines. WEST BOYLSTON.

Sept., 1858.

KEEPING SWEET POTATOES FOR SEED.

We generally select potatoes from one-half to one inch in thickness; the smaller ones generally dry up so as to be worthless in the spring. The next thing is to store them properly. Take old flour barrels or shoe boxes or almost any vessel that is not so tight as not to admit the air. A tight barrel or box we have always found unfavorable; old salt barrels, ruinous, the salt every time rotting the potatoes. We fill them, carefully shaking them down, then cover the top with well dried saw-dust, or dust from the road, or dry sand, or the soil they were raised in, well dried, will make a good covering. Then store them away in a room not subject to sudden changes, be careful in storing, however, not to cover so close as to leave no opportunity for the sweat from the potatoes to pass off, for sweet potatoes are like other things, they will pass through a sweat, and if there is no chance for the moisture to pass off, they must rot. The room must be kept warm by fire; you might as well throw them away at once as to attempt to keep them in this climate without fire. The proper temperature is about 50° by our common thermometers; though where you have a stove in your room the temperature may be raised to 70 or 80° without injury, as the air is much easier warmed than the potatoes. In the spring be not in too great haste to unpack and remove them: we have frequently been deceived by spells of warm weather, into removing our potatoes too early, and got them chilled and lost more by rot than we had all the winter before.—G. S. INNIS, *Columbus, O., in Ohio Cultivator.*

TREES AROUND BARNYARDS.

Much attention has been paid in your valuable paper lately to the management and cultivation of fruit trees. The subject is one of importance, and worthy of your consideration, a swell as more attention among farmers than it generally receives. I am willing to do what I can to call more attention to this subject, and would therefore suggest a plan in which a few dollars might be profitably invested by every farmer who has a barnyard; it is this: to set out as many apple or other fruit trees around the barn and yard as the room will permit.

Trees so planted will soon throw out their roots under the barn and yard, where they will find an abundance of nourishment which has soaked downward from the surface of the yard, and which, did they not save, could not be available in any other way. In consequence of their proximity to the yard and barn, they will not need any manuring or further attention, save to protect them from cattle, till they get out of their reach, which they will soon do, and come into bearing.

The fruit from trees so planted is large and well developed, and they almost always hang full. One of my neighbors who has a row of apple trees on one side of his yard, has twe trees of the same kind, one near his yard and the other some distance off; the one near his yard produces apples of twice the size, and more than four times the quantity of the other. My neighbor's trees are about sixty years of age, and the largest that I have ever seen; a number of them are about eight feet in circumference, at a distance of sixty feet across them through the heads, and are still growing vigorously.

It is also a great advantage to a yard to have trees around it, especially in winter, as they do much towards breaking the cold winds, and preventing much suffering among the cattle. I hope that those who feel disposed will try it this fall, as the outlay is so small, and the result so sure, that I doubt not they will be satisfied with the result, and an additional attraction be given to the old homestead.—*Homestead.*

ADVANTAGES OF EDUCATION TO FARMERS.

BY HENRY F. FRENCH, OF EXETER, N. H.

Soil Analyses—Danger to True Science from False Teachers—Analysis a Nice and Difficult Process—Superphosphate of Lime—Affection of Elementary Substances, and their Marriage—No Accounting for Tastes, either in Men or the Elements.

The subject of *soil analyses* is extremely interesting to the farmer. It is so simple and easy, just to be told of what plants are made—to be supplied with the necessary materials which one's land does not contain, and these ideas are so much more satisfactory than the mystery which formerly hung around all the processes of vegetation, that it is not strange, that even the cultivators of the earth, the last class, usually, to be carried away by new plans of advancement in their vocation, should be induced to over-estimate the practical advantages of analyzing soils.

There is danger to true science, when men have been imposed upon by false teachers. An erroneous idea prevails, that it is a very simple and easy process to analyze soils. Many seem to suppose that any farmer who can make an axe-handle, may sit in the chimney corner, and with a laboratory, consisting of a frying-pan and two or three old blacking bottles, may analyze a specimen of his soil, while his wife is cooking his breakfast, and having thus ascertained what element is missing to make up his crop, may go out with his waistcoat pocket full of some patent fertilizer, and administer it in homœopathic doses to his sickly plants, and so dispense with the old-fashioned manures.

A little examination will satisfy us that the utmost patience and care, with the use of accurate and expensive apparatus—that the nicest skill, and long experience, with profound scientific knowledge of the principles of chemistry, are essential to any valuable results in soil analyses.

A single example will illustrate this part of our subject. If we burn 100 lbs. of wheat to ashes, in an open vessel, we have left two pounds of ashes, of which one pound is phosphoric acid. A crop of wheat 30 bus. to the acre, weighing 60 lbs. to the bushel, or 1800 lbs. in all, would contain but 18 lbs. of phosphoric acid. This is all that the grain takes from the soil.

Now, we estimate that an inch of soil over an acre, weighs about 100 tons. The roots of the wheat would extend downwards ten inches at least, so that they would occupy 1000 tons of soil, and from this 1000 tons of soil they take the 18 lbs. of phosphoric acid. If we can form any idea of the proportion which 18 lbs. bears to 1000 tons, or 2,000,000 lbs., we can give some estimate of the nicety required to ascertain whether the elements essential to our crops, exist in the soil. The following remarks from a recent publication, present another view of the subject, equally striking:

"We know that on all poor lands, of proper texture, the application of 200 lbs. of guano to the acre will produce fair crops of grain and roots, and this is the difference between a barren and tolerably fertile soil. Now, this guano supplies only 6 lbs. of potash, 24 lbs. of phosphoric acid and 34 lbs. of ammonia. But the acre contains 3,920,000 lbs. of soil, to the depth of a foot.

Can analysis ascertain one part of potash in 600,000 parts of foreign matter, or one part of phosphoric acid in 150,000 parts, or one part of ammonia in 100,000 parts?"

Practical chemists are divided upon the question, whether the present power of chemical analysis can reach to so critical examinations as this. When we add, on the authority of Prof. Norton, that from 10 to 15 days of patient, constant toil, are required for a single analysis, and that from two to five years of practice even by an educated chemist, in a suitable laboratory, are requisite to give the necessary tact and skill for the process, we may at least conclude, what I proposed to show on this subject, that an uneducated man, so far from being capable of performing analyses of soils for himself, is not capable even of protecting himself from the grossest imposition by those who pretend, for a few of his dollars, to give him accurate knowledge on these points.

The study of Agricultural Chemistry, aside from the refinements to which we have alluded, is one of deep interest to every cultivator of the earth. It brings into constant practical use, some of the most curious and mysterious laws of nature, laws which were known to the alchemists of older times, who sought for the philosopher's stone, which should change base metals to gold, renew youth to the aged, and heal every disease—but which have waited for a generation that has chained the shrieking steam giant to its chariot, and bade the lightning carry its messages,—to bring them into useful service for mankind.

Of this kind, are the qualities of bodies known as the laws of *chemical affinities*, of *chemical combinations*, and the solubility and insolubility of bodies. All these laws are rendered available in daily practice in the manufacture of the new fertilizer known as *Superphosphate of Lime*.

Everybody who reads a newspaper, especially if it be an agricultural paper, is constantly reminded of superphosphate of lime. Even the *Russia Salve* and the Magical Pain Extractor are scarcely thrust upon our notice more pertinaciously.

That the true Superphosphate of Lime is a valuable manure—a most powerful fertilizer for many soils, is manifest to all who know its composition. That the community is in great danger of gross imposition in the sale of spurious articles, under this name, is equally plain.

Whether even the true Superphosphate will prove to be cheap enough to warrant its general use, is yet uncertain.

But my purpose was to describe briefly the process of making this famous article, to illustrate how science makes every law of nature useful to mankind.

Chemical combinations take place only in fixed proportions to suit her taste, and, before the temperance times a gentleman could mingle his brandy and water as he pleased, subject to any quantity of logwood and other nourishing ingredients added by the manufacturer; but chemical combinations are not thus managed.

For instance: Phosphoric acid and lime will combine in two proportions only, and these are—two atoms of phosphoric acid to two of lime, which make Phosphate of Lime, and secondly, three atoms of phosphoric acid to one of lime, which make Superphosphate of Lime.

Phosphate of Lime is not readily soluble in

water. Superphosphate of Lime is very easily dissolved. The nutriment of plants is taken up only in a liquid form, and it is desirable, therefore, to apply all fertilizers in the form most soluble.

Superphosphate of Lime is made usually of *bones of animals*, which are mostly *Phosphate of Lime*, and as all know, not readily dissolved in water.

In this form, as has been said, the *phosphoric acid* and *lime* are chemically combined in the proportion of two and two.

They form a sort of equal union or marriage—one *bone* if not one flesh.

Now, the object is to break up this union, to entice away from the Phosphoric acid its lawful lord and master, the Lime, which we may regard as the weaker vessel.

Now the process is perfectly natural. All we have to do is, to bring to her neighborhood and notice, an object of stronger *affection*, an *affinity*, as the chemists term it. Sulphuric acid and lime have a stronger affinity or affection for each other, than *Phosphoric acid and Lime*, and so we make use of this fact, and by adding sulphuric acid, we at once entice away a proportion of the lime, which forms a union with it as *Sulphate of Lime*, and leaves the remaining lime to form the only remaining connection which the laws of chemical combination allow, with the *phosphoric acid*, as superphosphate of lime.

If the question be asked *why* do chemical combinations occur only in certain fixed proportions, we cannot answer.

If asked why in one proportion, the same substances are more soluble than in another, we cannot tell. When we have found uniform results from certain operations, and can divine no reason, we call it a law of nature.

Why has one substance a stronger affinity or affection for another, than for a third?

A Yankee might answer, by asking why one young gentleman and lady have a stronger affection for each other, than all else in the world beside. The *facts* are equally apparent,—the explanation often extremely difficult.—*Country Gentleman.*

THE LAMAS.

Apropos to the attempt to naturalize the camel in the United States, efforts have just commenced to acclimatize the lama—a native of South America—the animal from which the famous alpaca wool is obtained. Forty-two of these animals recently arrived in this city, being imported from Escuador by way of Aspinwall. They are destined, we understand, for the Eastern States, in the hope that they may become inured to the climate, and take the place of sheep, in some cases, on account of their wool, which is very valuable. In their native regions they are shorn twice every year, and yield, at each shearing, about sixteen pounds—four times the quantity obtained from the common sheep, which are shorn only once annually. They are pretty large animals, weighing from 200 to 300 lbs., and are used as beasts of burden in South America—they are the American camel. They live on coarse herbage in the region of the Andes mountains; and it is believed they will prosper in the hilly portions of Vermont, Maine and New Hampshire. If not, we think they can be acclimatized in the mountainous regions of Virginia, North Carolina and Tennessee.

We really hope that this laudable effort to introduce the lama into our country will prove successful, as its flesh is said to be equal to the best venison, while its wool is now extensively employed in manufacturing very beautiful fabrics. We also hope that if one effort fails, others will be made, as it is reasonable to suppose that, with our great variety of climate and soil, this useful animal can be acclimated in some part of our country.—*Scientific American.*

NEW AND VALUABLE DISINFECTING AGENT.

A Dr. Angue Smith of Manchester, England, lately read a paper before the Society of Arts, London, England, in which he stated that he and a friend named McDougall, some years ago had made numerous experiments to find out a good disinfecting agent, and at last found that Sulphate of Magnesia, which is procured from Magnesian Limestone, and a certain per centage of carbonic or phenic acid, which is procured from coal tar, made a disinfecting powder of remarkable efficacy. The mode of using this powder is to first sweep the stable, then sprinkle it with the powder, the quantity being about the same as that of sand to sprinkle a floor. Then the litter is thrown over this. This powder has been found so powerful and effective, that when introduced into stables where sick and wounded army horses were, no disagreeable odor was perceptible either from the wounds or the fæces. A stable keeper, who always kept on hand a large number of horses, found that by using this powder his horses were healthier, lung diseases had disappeared or decreased, while their eyes and health did not suffer from the irritating effects of the ammonia which is to be found in all stables. It was also found that the stable was cooler, and that the dung did not decompose, so that the flies did not breed in it, and there were fewer of these pests to annoy the beasts. Mr. Murray, the stable keeper, also found that after the manure of his stable, in which he had used this powder, had been used one year, he was offered double for it next year by the market gardeners who had purchased and used it. As Dr. Smith was not a trading man, had no interest in manufactures, and did not mean to have, his statements in relation to this matter are considered reliable and disinterested.

FARMING ON A GRAND SCALE.—Several men of wealth in New York, Buffalo and Chicago, (says the *Movement*, a new paper just started in New York,) have it in contemplation to establish somewhere in the West, a Leviathan Farm, of from 100,000 to 200,000 acres. Their object is to do for agriculture, by the use of combined wealth and the power of machinery, what has been done in the past half century, by the railroad and factory, to supercede the old stage-coach and the spinning-wheel. They will organize the vast tract into two rival establishments, with military organization of labor, gigantic machinery, to plow, to plant, reap and harvest—vast

herds of horses, sheep and cattle of the most select stock, and the culture of fruit and grain on a grand scale.

The following beautiful Ode was written by John Whittier for the Agricultural and Horticultural Exhibition at Amesbury.

This day, two hundred years ago,
The wild grape by the river's side,
And tasteless ground-nut trailing low,
The table of the wood supplied.

Unknown the apple's red and gold,
The blushing tint of peach and pear;
The mirror of the Powow told
No tale of orchards ripe and rare.

Wild as the fruits he scorned to till,
These vales the idle Indian trod;
Nor knew the glad, creative skill,
The joy of him who toils with God.

O, painter of the fruits and flowers!
We thank Thee for Thy wise design
Whereby these human hands of ours
In Nature's garden work with Thine.

And thanks, that from our daily need
The joy of simple faith is born;
That he who smites the summer weed,
May trust Thee for the autumn corn.

Give fools their gold and knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all.

For he who blesses most is blest;
And God and man shall own his worth
Who toils to leave as his bequest
An added beauty to the earth.

And, soon or late, to all that sow
The time of harvest shall be given;
The flower shall bloom, the fruit shall grow,
If not on earth, at last in heaven!

INDIAN CORN.

Two Hundred Bushels per Acre.—It has been published—and so far as we can see, duly certified—that Dr. J. W. Parker, of Columbia, S. C., grew, in 1857, upon his farm near that town, 200 bushels and 12 quarts upon one measured acre of ground, and 116 bushels and 6 quarts upon another acre. In the report to the State Agricultural Society, Dr. Parker states that the seed selected for planting was from North Carolina, and denominated "Bale Mountain Corn." After soaking it during the night in a strong solution of nitre, it was planted from eight to twelve inches distance in the row, covered with hoes, and the ground rolled, leaving it perfectly level. The land was the border of a small creek, underdrained, and prepared by plowing in November, and manured in December with twenty-five two-horse loads of cow-house manure, plowed in and followed by a subsoil plow drawn by two mules. About the first of March another coat of good stable and cow manure was spread and plowed in as the first. Early in April, three cart loads of air-slacked lime and two sacks of salt were spread over each acre and lightly plowed under. On the 14th of May the ground was thoroughly plowed with Glaze's large iron plow, harrowed level and laid off thirty inches apart with a shovel plow. Guano and plaster were sprinkled in the furrows, near 200 pounds of the former and 300 pounds of the latter to each acre.

On the 14th of May the corn was plowed with a long, very narrow plow, and dressed over with hoes. On the 5th and 17th of June the same work was repeated, each time leaving the ground level. About the first of July it was necessary to draw a ridge about the roots of the corn to prevent its falling. During a protracted drought, acre No. 1 was twice irrigated and acre No. 2 had the water turned on it once.

The yield of acre No. 1, as before stated, exceeded 200 bushels. No. 2 was part of it replanted, which the Committee say prevented the yield being as large as the other.

True, this crop cost labor and manure, but does it not pay better than the tens of thousands of acres that do not yield ten bushels per acre, for such are as common as blackberries all over the Southern States. The land used being "sandhill brushland," required the high manuring, as it is not naturally fertile enough to produce such crops. The secret, however, is in the underdraining, the frequent plowing and subsoiling and irrigation.

For the New England Farmer.

"FALL TRANSPLANTING."

Your correspondent for October, under the above caption, speaks of his ill success in transplanting asparagus. Allow me to state an experience of the opposite kind. Two years ago this month I sowed some asparagus seed which in the following spring came up very well. The bed, however, not being made to my liking, I removed the finest of the plants—say a hundred—to a new bed which had been prepared by deep digging and rich manuring. This was done last October, and of the one hundred plants, ninety-nine of them lived and have grown luxuriantly during the past season.

With regard to raspberries, my experience has been that they may be transplanted at any time. I have transplanted Fastolfs, every week since last June, and shall put out a few more some time this month to fill out imperfect rows—all of which I expect to see flourishing next spring.

Ware, Mass., Oct. 7th. H.

Give the Plow and the Hoe no Rest.

1. In order to prevent the growth of weeds.

2. To insure needed moisture through the deposition of a greater amount of *dew*, upon which plants so largely depend—softening the earth, so that the moisture that condenses upon the surface may penetrate more deeply, and rendering it more porous for the easier passage of the atmosphere, for condensation in the cooler soil below.

3. To secure a greater absorption of ammonia.

4. To aid in the decomposition of minerals whose elements are food of plants.

☞ Spiders have four paps for spinning their threads, each pap having one thousand holes, and the fine web itself the union of four thousand threads. No spider spins more than four webs, and when the fourth is destroyed, they seize on the webs of others.

For the New England Farmer.

THOROUGH DRAINING.

"The advantages of thorough draining are universally recognized, and tile are for sale everywhere, * * * yet a multidue of her [New England's] purely agricultural towns are undergoing, more or less rapidly, a process of depopulation."—*Atlantic Monthly for August.*

Finding myself solitary and alone on the subject of Thorough Draining,—all three of the agricultural editors of the *Farmer*, and its whole phalanx of contributors, either by word or silence consenting to the system,—I took an opportunity the other day to call upon the Commander-in-chief of these forces and inquire if it were his pleasure that I should report myself "not dead, but speechless;" or whether, after the hard hits I have received, especially after the declaration that "Mr. Sheriff Mechi is not such a blockhead as to suppose that draining and irrigation cannot be necessary on the same land," he would advise me to count myself "among the missing." But, reader, if it has ever been your good fortune to call on Gov. Brown, you can appreciate the kindness with which he laid his finger upon my pulse, and assured me that I was by no means as yet hopelessly in the "ditch;" that I might speak out—might bring on my objections, and he would publish them, because the *Farmer* gives all parties a hearing; and because, said he, one of your articles may do the cause as much good as two in favor of draining. Was that an equivocal compliment? Did he seat me at his editorial elbow to play sly jokes at my expense? No; he meant that I should help the cause of truth, not the cause of draining!

As I have been charged with manifesting a "spite against the English notion of underdraining," I ought, perhaps, to define my position. In the extract with which I commenced my first article, page 134, it is said:

"Draining, as understood thirty years ago in England, meant merely the making of channels to carry off surface water, and underground drains to dry bogs or cut off springs. It has now an *entirely different meaning* in the agricultural world."

Now, I believe in draining our land here, as that word was understood in England thirty years ago, and I disbelieve in all modern "entirely different meanings;" I hold to the policy and necessity of "drying bogs, cutting off springs" and removing standing water, but I deny the expediency of draining for any other purpose—whether to "give greater lungs and consequently more vitality to the land," to "cause the poisonous excrementitious matter of plants to be carried out of the reach of their roots," or to "hasten the decay of roots and other vegetable matter," in the soil. In a word, where farmers do not see enough of the evils of too much water to induce them to throw their fields into "lands" with a "dead furrow" between, as is done in Western New York, or to adopt any other cheap means to conduct off the rains of spring and fall, it is unnecessary to exhort them to the practice of thorough draining.

To the arguments or reasons which I have already presented as justifying this position, I propose to add but a single one, viz.: *That the thorough draining of our old farms in New England is simply an impossibility.*

According to the census statistics of 1850, the average value of farms in New England is twenty dollars and twenty-seven cents per acre, and the average value of agricultural implements to each farm is $77,17. With few exceptions, the owners of these 167,651 New England farms, with the aid of their families, do all the work that is done upon their premises; consequently, if ditches are to be dug, they must do the digging.

Now, what is thorough draining? In an English work, entitled "Principles of Agriculture, by Albert D. Thayer," it is said: "The art of draining is one of the most difficult of all those appertaining to agricultural science." Like law and medicine, it requires its learned professors.—These have already been called into existence, in our larger towns, and their professional services are advertised in our public journals—not to dig the ditches, by any means, but simply to "advise."

In a late number of the *Farmer*, however, we caught a glimpse of the ditcher himself. He digs "in stiff tile clay" four feet deep, and places the tile for about eleven cents a rod! and even at that price the cost of draining an acre is thirty dollars! For my own part, I turned from the picture with unfeigned gratitude that "our lines are cast in pleasant places," in "a land of hills and valleys, that drinketh water of the rain of heaven."

For another purpose the writer of that article assumes that labor costs twice and a half more here than in England. Twice and a half thirty dollars are seventy-five. But "fallowing, levelling, subsoiling, &c.," on the same land, we are told, cost thirty-five dollars more. Admitting these to be, as I suppose they are, part and parcel of thorough draining, then, if the cost here is not about $162 per acre, what is it, according to Mr. Mechi's statements?

True, we have a statement on page 575 of the *Farmer* for 1856, of land being drained in Maine for $67,50 per acre. But in this case the drains were twice as far apart as English farmers recommend, and only three and a half feet deep. Why this liberty with "the system," why should thorough draining be twice as thorough in England as here, when the experimenter himself declares that "all the benefits obtained in England, *and more*, [italics his own,] are attainable here," and, also, that my "assumption that the humidity of England's climate creates a necessity for drying land there, which does not exist here," is one of my "errors of fact?" Did he feel something as the negro did who announced to his master, "One of your oxen dead—t'other too?" Was he afraid we "couldn't bore it" if he gave at once the figures of the actual cost of the "thorough" English system?

But assuming either of these sums, or any other sum that will be named by any advocate of thorough draining, as the cost per acre, and what is the prospect of applying the system to farms in New England that, buildings and all, are worth some twenty-six dollars an acre? Must we not wait until our present population of small farmers, with small means, shall give place, on the one hand to a class of capitalists, and, on the other, to a class of servile laborers?

But I am running wild of my text from the article in the *Atlantic*, which has been variously no-

ticed in the columns of the *Farmer*. The advocates of thorough draining may share the surprise expressed by the *Atlantic* writer, that tile "for sale every where" should fail to check the process of depopulation that our agricultural towns are undergoing, but I do not. A life in a four-foot ditch, or a life in the "social centres!" How long will Young America balance this alternative? Practical faith in the necessity of thorough draining of our old farms in New England would, in my opinion, depopulate this portion of the country. It would "start the boots"—boots that would never "forget where they had been," after once standing in a ditch four feet deep—of every farmer's son, and give him an excuse for leaving the old homestead, that few of the advocates of draining would meet by placing their sons in his place.

Indeed, I do frankly confess that every plan for draining which I see in the papers, and every tile that is exposed for sale "everywhere," give me the horrors. In imagination, I see these tile discharging a stream of young men from our farms out of all proportion to their capacity for conveying water. S. F.

Winchester, Oct., 1858.

MUCK AND PLAIN LANDS—MOWING MACHINES, &c.

In a recent letter from Lancaster, Mass., in which we spoke of Dea. CHAS. HUMPHREY'S farm, a mere allusion was made to several matters which are worthy of more extended notice.

A portion of his lands lie on the banks of the Nashua river, are free from stone, and very productive. On these his corn and oats each average fifty bushels per acre, and rye thirty bushels. He cuts 80 to 90 tons of hay, and this year harvests about 400 bushels of corn and 300 of oats.

On one extreme edge of his farm, Mr. H. has a track of *pine plain land* of the very poorest quality; it has been cropt with rye and buckwheat from a time "whereof the memory of man runneth not to the contrary," and without a particle of manure having been applied to it within his recollection. Failing to find a purchaser of this land, though offered at the low sum of *five* dollars an acre, he resolved to experiment upon it with swamp muck, and learn whether it could be brought into a fit condition for cultivation, at a paying cost. As is quite often the case, at the base of the plain, beds of muck were deposited in large quantities, and in this instance, of an excellent kind. This was hauled to the plain and deposited in heaps, and to every *fourteen* loads of muck, *one* load of manure from the cattle stalls was mingled with it, but not until the muck had become seasoned by exposure to the air and frosts. The manure was thoroughly incorporated with the muck by repeated plowing, so that the whole mass was in a finely pulverized condition when applied to the land. Under this treatment, we saw portions of the land covered with corn, potatoes, carrots, mangolds, turnips, beans and apple trees. Where the dressing was spread broadcast the trees appeared healthy, and the foliage large and of good color; but in one or two rows, where the muck had been liberally applied directly to the spot where the tree was set, several of the trees had died. The crop of carrots, mangolds and turnips, was very fine—the roots being large, and clear with few fibres. The potato crop was not so good as the root crops, but better than an average crop on old land. The bean vines were remarkably luxuriant, and had set for a great crop, but being planted very late, the frost had ruined them. The corn crop was light—not more than 15 to 20 bushels an acre,—but where the muck compost had been applied two years it was estimated that the crop was *ten* bushels more than where it had been applied only one year. This fact, we think, shows the permanent effect of muck as a fertilizer. The oat crop on this land yielded sixteen bushels per acre, of good quality. In consequence of the cheapness of manuring, and the ease with which this land is cultivated, there can be no doubt, we think, but the net profits of the crops raised on this land, are as great as those on the best lands of the farm.

Dea. Humphrey is fortunate in possessing quantities of muck *of a good quality*, lying near the spot where it is to be applied. This is not always the case, and, therefore, great care must be used *in the selection* of muck. We rarely meet a farmer who seems to us to duly appreciate the value of muck as a fertilizer, and who avails himself of all the advantages which it offers. But it is not so in this case, as muck enters into all his arrangements for manuring and improving his heaps of manure. One or two ox-loads are distributed over the leanto floors, behind the cattle, every working day, and the succeeding day thrown into a long shed where the swine run, and from thence is carted to the fields. But to make it certain that *there shall be no loss*, the floors are tight, a little descending towards one end where a tank is sunk which receives whatever liquids are not absorbed by the muck. This is diluted by rain-water from the roofs, and then sprinkled on grass land.

Dea. Humphrey is a man of progress, and avails himself of all the helps that come within his means in order to facilitate the business in which he is engaged. So, as a matter of course, he was among the first to use a *mowing machine*. One that we saw in his barn, *Ketchum's Patent*, he had used four years, with a cost of less than one dollar for repairs. He informed us that the machine had been managed by an Irishman who had cut, as a general rule, one acre an hour, but when more was needed, it was not found difficult to cut at the rate of an acre in *forty* minutes.

He prefers the Ketchum to any other machine, and stated to us that his horses do not work harder with it in cutting an acre an hour, than they do in ordinary stubble plowing. A week or two after his grain is cut, he passes over all the fields with the machine, cutting down the stubble, and the weeds before they go to seed, rakes with the horse rake and uses the crop for litter under the cattle. Even under this rough usage, the machine does its work quickly and well, and keeps in order.

One of the pastimes in which the deacon indulges, when he wishes to keep away from the graver duties of the farmer, is the *propagation and rearing of Trout.* He has subterranean abodes for them as winter quarters, and different ponds for fish of various ages, as some of the elder fish, forgetful of their paternal relations, indulge their cannibal propensities, and swallow the younger fry whole! So the spawn is in one pond, on beds of white gravel, the yearlings in another, while the two-year olds and upwards, fraternize and seek their prey in another direction. His operations, so far, are somewhat experimental, but they certainly promise success.

Since writing the first notice of this farm, many inquiries have been made of us, both verbally and in writing, for more minute particulars in relation to some special points,—and among these inquiries we find the idea seems to prevail that the proprietor is a *capitalist*, and can enter upon any system of improvements he pleases, without detriment to his farming operations. Had such been the case, our interest in the matter would be feeble compared with what it is now, as we desire to see improvements made through the avails of the farm itself. On this point, after speaking of some labor-saving contrivance recently engaged in, the deacon said, "I wish it to be understood that *we make no improvements but what the farm pays for*—first earning the money through the regular operations of the farm to pay for all we do."

There were several other matters of interest presented themselves as we passed over his farm, but our article is too long to refer to them now.

ASHES—SOME WAYS TO USE THEM AS MANURE.

1. One excellent way, is to scatter them thinly over the ground, and leave the dressing to soak into the soil. This is the best mode on meadows that you do not wish to plow.

2. They may be applied in the same way to land which you are going to plow for corn or potatoes.

3. Unleached ashes may be applied to corn after it is up, at the rate of a tablespoonful to a hill, partly as a manure, and partly to arrest the ravages of cut-worms.

4. It may be profitably used as a dressing for strawberry beds in the spring. It should be applied dry, and spaded in. Strawberries love an application of this sort.

5. They may, when unleached, be strewn over crops when growing. Such as grapes, or oats, or other grain. They should be scattered dry.

6. They may be scattered with the seed of winter grain, and will often thus be of great use.

7. They form an excellent dressing for lands, to be used for fruit trees. They contain so much of what is needed for the growth of trees, that a generous application of ashes, plowed in deep, will be beneficial. Trees already set out, may be helped by spading in ashes sparingly about their roots.

8. Applied to clay soil, they soften it. Used on sandy soil, they harden it. Scattered on sour land, they correct its acidity. They are quite generally useful.

For the New England Farmer.

MARYLAND STATE FAIR.

[From our Special Reporter.]

Baltimore, Md., Oct. 22, 1858.

The State Fair of Maryland closes to-day after a very successful week. In many respects it has been superior to our State Fairs in New England, while, in others, it can hardly compare very favorably. The show of Devon stock was superb, and Mr. Patterson was on the ground with some of the finest Devons in the country when considered with reference to dairy qualities. I had the pleasure of becoming acquainted with him, and of hearing from his own lips the statement of his efforts and experience in introducing and breeding this class of stock. I was particularly glad of this opportunity, and improved it to the best of my ability. His stock is very different from the type of modern improved Devons frequently met with at the North, and his efforts to get milk from them have not been without success, but his cows are larger in the bone, coarser in form and defective in the crops.

On my saying to him that we had many Devons in New England, that went under the name of Patterson Devons, he laughed and said that he had to bear the responsibility of many that had not a strain of his stock in their veins. Mr. Patterson exhibited the finest formed Devon steer that I ever saw. The show of Jerseys was also very extensive and highly creditable, but not to be compared with this class at the Massachusetts State Fair last fall. The Ayrshires were numerous, and many of them very fine. The short horns were limited in number, and they are fast giving way, in this section, to other breeds. A herd of imported Holstein cattle attracted considerable attention. They are said to be very good as dairy stock, and to adapt themselves readily to this climate. They are nearly all black in color, some of them having white faces. Some of the finest Cotswold sheep were exhibited by Mr. CARROLL, an extensive sheep breeder about twenty miles north of Baltimore.

In the department of agricultural and mechanical implements the exhibition was also extensive and creditable, though not so much so as we naturally expect in Massachusetts.

Gen. WILLIAM SUTTON, of Salem, delegate from the State Board of Agriculture to the National Agricultural Fair at Richmond, is in attendance to-day and expresses himself as highly gratified with the Maryland State Fair. He was invited, together with your reporter, to be present at the meeting of the society last evening, when the reports of committees were made and the elections of officers took place. Prof. J. W. HOYT, of the Wisconsin *Farmer*, is also present, and I have been exceedingly gratified by his acquaintance. Tomorrow we shall be *en route* for Richmond, where I shall inform you of the character of the exhibition of the United States Agricultural Society.

I understand that the Patent Office Report for 1857 will be issued in about two weeks. It is delayed now by the engraving only, and this is nearly completed.

Corn and other vegetation in the vicinity of Baltimore is as green and flourishing as it is with us on the 10th of September. SYPHAX.

For the New England Farmer.

ROOT CROPS.

I noticed in the last *Farmer* the article of D. NEEDHAM, on English Turnips. Can he pull, cut off the tops and put in the cellar a hundred bushels for three dollars? If he can, I shall try and hire him to gather my turnips.

As to cutting them up, and feeding them out, I found it quite a job. Fifteen or twenty years ago the root-crop was quite fashionable in this region. Almost all our farmers went into it, and the few who did not were looked upon as being behind the times, poor farmers, &c. The raising of ruta bagas, English turnips, and such crops, to any great extent, is as unfashionable with our farmers now as it was the reverse then. *Why* this change, is not for me to say. Why *I* changed I am willing to tell.

My first trial was to throw about three or four papers of ruta-baga seeds over my menure heeps that I was going to put in the hill for corn. It worked finely. I had a grand crop, more than one hundred bushels to the acre. They cost almost nothing, as you would look at it, but the corn told a different story. In those hills that had one or two good stout turnips the ears were small, and many of the stalks had no maturing ears on them. As near as I could estimate I lost at least half the corn crop in the hills where the turnips were, say twenty bushels to the acre.

The next year, on the same land, I tried English turnips—they also did well. But the corn suffered again, and was not near as good as when I did not sow the turnips. I found if my hired help had to carry out three or four bushels of turnips in the morning and cut them up and give them to the cattle, it took not less that fifteen minutes to the bushel. They increased the product of milk, but not of butter, either in quantity or *quality*. This was not all—I found on careful experiments that I have never been able to raise a great crop of grass after turnips till I manured again, or gave the land extra manure. This has been my experience as to effect. On the rich land of the West it may do.

As to the goodness of the crop to feed out, I would not let you put one hundred bushels of turnips into my cellar if you would give them to me. They would scent the whole house more than they are worth, and I would not feed them out for them. E. E.

REMARKS.—Our correspondent is a clear thinker, and bold writer; does not hide his light, usually, or qualify his opinions, so as to weaken their force. Does not the withholding his name and place, in this case, imply a *little doubt* whether he is quite right in his views about the root-crops? We are glad of his observations nevertheless, because this will lead to investigation, and every farmer *ought to know* whether the crops he feeds to his stock are profitable or not.

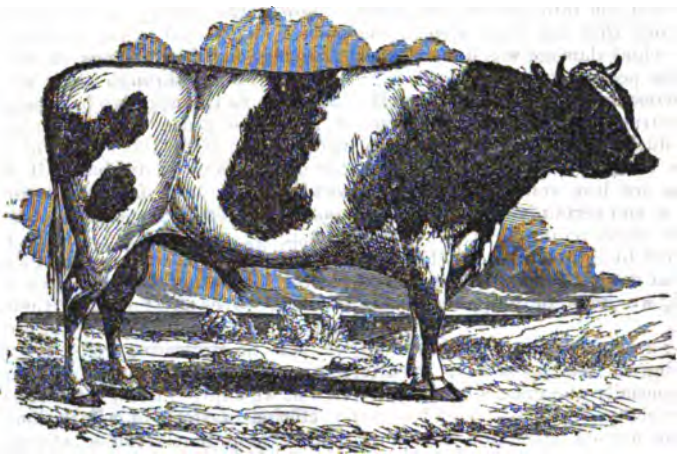
For the New England Farmer.

ROCK-LIFTER AND WALL-LAYER.

In the *Farmer* of Oct. 1, I saw a letter from your "Woods Hole" correspondent, "I. S. T.," in which he attempts to enlighten you in relation to our rock-lifter and wall-layer. But as is frequently the case with those who wish to enlighten others, your correspondent evidently needs light himself. He says there has been one of this same construction and manufacture in use at the State Farm at Westboro' for three years past, and one on the farm of Mr. R. S. Fay, at Lynn, for the same period, and that he has used one himself for eight years, &c.; in all of which he is mistaken. There is no such machine at the State Farm, nor at Mr. Fay's, neither has he one himself. The machine to which he alludes is one got out by Mr. DEVOL, and as you say in your remarks, is a very useful machine, and if he has not been, he ought to be, amply remunerated for his study and enterprise in getting it up; but Boles' patent is a decidedly better machine, as we claim, and such is the invariable opinion of all disinterested men that have seen them both in operation, as far as I have ever known or heard. The machine to which he alludes is erected on four wheels; ours stands on two, and can be moved and set over a rock or on the line of a wall as readily and with as much precision as a common ox-cart. With the Devol machine the rocks are hoisted by man-power applied to brakes or cranks. With ours the hoisting is done with a horse or oxen, saving much hard manual labor, and doing the work much faster. T. ELLIS.

Rochester, Mass., Oct., 1858.

ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, for 1859, with 144 engravings. This is the fifth number of this popular work; a work containing more valuable suggestions to the farmer and horticulturist than many volumes of more pretending titles and size. It is made up by J. J. THOMAS, one of the clearest and most practical writers among us, and published by LUTHER TUCKER & SON, at Albany. For sale by A. Williams & Co., Boston.



PORTRAIT OF AN IMPORTED DUTCH BULL.

In our last we gave the portrait of a beautiful imported Dutch cow, the property of WINTHROP W. CHENERY, Esq., of Watertown, Mass., and having introduced that illustration of this breed of cattle to the reader, we propose now to present another view of it, and make the subject as complete as possible.

The animal figured above was also imported by Mr. Chenery in 1857, from Holland, near the Beemster, in the northerly part of Purmerend. This animal illustrates Mr. FLINT'S new work on MILCH COWS, and we draw the following description from the same source.

The Dutch cattle are, in general, renowned for their dairy qualities; but especially so are the cows of North Holland, which not only give a larger quantity, but also a very good quality, so that a yield of sixteen to twenty-five wine quarts at every milking is not rare. Next to these come the West Friesland and South Dutch cows, from which from twenty to twenty-four quarts of milk may be calculated on. Though one could not take a certain number, and calculate surely what the yield of each cow would be, yet he could come very near the truth, if he reckoned that a cow, in three hundred days, or as long as she is milked, gives, on an average, daily, from six to eight quarts of milk, from which the whole annual yield would be from one thousand eight hundred to two thousand four hundred quarts. Of this, the cow gives one-half in the first four months, one-third in the next three, and in the remainder, one-sixth. These superficial results cannot be taken, however, as the fixed rule.

Of the cows of Gelderland, Overyssel, and Utrecht, the yield cannot be reckoned higher than sixteen quarts daily, and that only during the first half of their milking season.

For the New England Farmer.

HOW TO PREVENT BUILDINGS BEING STRUCK BY LIGHTNING.

MR. EDITOR:—I have seen several communications in your papers of the last few weeks on the subject of electricity, and its agency in the firing of buildings. Many of the statements that have been made are true, both in regard to the laws that govern the fluid, and other matters in connection with the subject, but none of them give a remedy that can be used to avoid the disasters that arise from the "equilibriating of these imponderable forces." As Franklin's practical mind led him to say "*Qui bono*," to know how the trouble is generated, is of no value if we cannot find a cure, so I would ask, of what value all these statements? What we want is, to know how we may guide these great forces, and if we cannot make them subservient to our interests, and prevent their doing us injury.

The protection of buildings from the disastrous effects of lightning, and thereby the saving of human life, is the most valuable practical application of the theories of electricity; and undoubtedly with this end in view, the inventive genius of our people has been turned in this direction during the last few years, bringing out some half-dozen different lightning rods, and as many different insulators; but all, I believe, to very little purpose, for still our buildings are struck by the bolt, life is endangered, and property consumed.

The great question, then, recurs, "How can we

be protected?" I answer, *by thoroughly ventilating a building, you perfectly protect it.* I have never known of a building being struck by an electric bolt that was well ventilated, but on the contrary, if you examine into the circumstances connected with one that has been struck, you will find that the chief damage was done to that part which was the poorest ventilated.

One of your correspondents says, "seven-tenths of the buildings struck by lightning are barns, and this occurs during the curative process of the hay;" this is undoubtedly true, for without doubt, our barns are less ventilated than any buildings we have, and certainly very much less in proportion to their requirements, and that they should be fired by lightning is only the natural result of great natural causes; if we wish to avoid the result, we have only to remove the cause.

Let us look for a moment at the process that is carried on during the making of hay. Nearly all vegetables, especially the grasses, are highly charged with electricity, both positive and negative, and by their mutual attraction they hold each other in subjection. After the grass is cut, evaporations begins, and if it be a good hay-day, goes on very fast. Volta has shown very conclusively, that "the evaporation of water sets positive electricity free, which goes into the atmosphere, while the negative fluid remains in the body from which the water was evaporated." The farmer then puts into his barn a quantity of hay highly charged with negative electricity, and this process he carries on from day to day, until at last he has completed one of the largest and most powerful batteries that could be conceived of; in a few days, clouds form and hover over his building; they are charged positively, as the atmosphere usually is. Nature, true to her laws, must establish an equilibrium between these two bodies of electricity; the positive fluid in the cloud enters into union with the negative fluid in the hay, intense heat is evolved, and the barn is fired. Now, how could this result have been avoided? The cause was unavoidable; the positive fluid *must* go into the atmosphere, because it had a greater affinity for that than for anything else; the negative had a greater affinity for the hay than anything it came in contact with, and must remain; after the positive fluid had escaped into the air, it was beyond the control of man, and only subject to the control of the winds.

If the lightning rod theory could be carried sufficiently far into practice, it would answer our purpose; if this cloud could be pierced by a good conductor, putting it in connection with the ground, the great reservoir both for the absorption and for the supply of this fluid, then the positive body would pass silently down until an equilibrium was formed; but this is simply an impossibility; we must next turn our attention to the negative fluid, to remove that. We learn from Coulombe, that the laws which regulate the gradual dissipation of electricity have been investigated, and the causes which operate are,—"1st. The imperfection of the insulating property, and 2d. The contact of successive portions of air, every particle of which carries off a certain quantity of electricity." His experiments show conclusively that electricity is capable of being transferred like caloric, and that as water is one of the best conductors, any portion of it suspended in the air tends to carry off electricity from bodies charged with it.

Now if this theory be true, and it has never been controverted, what prevents our so constructing our buildings as to be able to send currents of air through them at our will, and thus remove the negative body, and by removing it, move the cause of our troubles? It is as necessary to apply this system of ventilation to our dwellings as to our barns, if we would protect them, for it is found that the air of close rooms, vitiated by respiration, is negatively electrified. In olden times, when the good old-fashioned fire-place was in use, we had a more perfect ventilation than we have now with our air-tight stoves and furnaces; then our dwelling-houses were not damaged by lightning, although we had no protecting rods, and the only way that we can secure to ourselves the same immunity that we enjoyed then, is to return to an equally efficient system of ventilation; this can be done without much trouble, at one-half the cost that would be met in covering our houses with rods.

And now, Mr. Editor, one word to the farmer, and I will close this communication.

Barns, as they are being filled with new hay, should be kept open night and day, and if there is a window in the roof, that should be kept open also, for at least thirty days after haying is finished; but this will not be sufficient to ventilate a large bay of hay, and a portion of the floor should be constructed with slats secured underneath with a tight box, (so as to exclude the exhalations from the cellar,) connecting with a pipe running to the outside of the barn; by this plan currents of fresh air might pass continually through the mow, keeping the hay in most perfect condition, free from all these dangers we have been considering, and also from any decay or *must* which is very common from imperfect curing.

ELECTRICITY.

Groton, Oct. 25, 1858.

CHINESE AGRICULTURE.

The *Pennsylvanian*, referring to a narrative of travels in China, published by a Russian officer, says:—

"This author, like every other who has visited China, bears testimony of the high development of agriculture in that mysterious country. The harvest in China, he remarks, 'produces fifty, seventy, and even a hundred fold. The cause will be found in the care with which they manure the ground, and the custom of sowing early, of weeding and watering, etc.' The acre of land yields in England, Germany and France, twice or three times as much as with us, but the Chinese agriculturist surpasses even the European by far. 'How infinitely inferior,' says Professor Liebig, 'is the agriculture of Europe to that of China! The Chinese are the most admirable gardeners and trainers of plants, for each of which they understand how to prepare and apply the best adapted manure. The agriculture of their country is the most perfect in the world, and there, where the climate in the most fertile districts differs little from the European, very

little value is attached to the excrements of animals. With us, thick books are written, but no experiments instituted,'" &c.

Travellers tell us of one particular attainment of Chinese Agriculture, which, though it is not always of practical value, indicates a wonderful knowledge of the laws of vegetable growth—that is, the power of enlarging or dwarfing, at will, many of the productions of nature. Thus, an oak tree, for instance, will frequently be seen growing in a flower-pot, bearing its thrifty little leaves, and bringing its tiny acorns to maturity, with all the regularity of its forest kindred, the entire tree not being more than two feet high. Such specimens of human ingenuity may be worthless, but they imply a knowledge and skill that are worth a great deal.

A NICE WAY TO MAKE APPLE TREES.

Get a tree from a nursery, (no matter what kind,) such as they send out, or if so large as to be unsalable, just as good. Let it be straight and thrifty. Cut it square off at just the height you want the top, and splice or whip graft on it, *one scion*, with three buds above the waxed paper with which it is wound. To make it more sure not to get displaced, tie a strip of bark around over the waxed paper, as tight as you can; set your tree, and it will make a beauty. Get the nurseryman to do it for you if possible, as he will do it better than you can. I have trees made last spring, that put out strong shoots two feet in length, precisely alike. This spring I cut back to six inches, and when the new shoots start allow six to grow, saving those well placed to make a handsome top. Next spring, shorten them one-half; after that, use your judgment. I have trees grown three summers, that look like miniature nature trees—*very fine.* I prefer such a tree, to one from a nursery ready to set. If your friend at the jumping off place send you a scion in a letter, you may have a tree better than one of the same sort got at a nursery.—*Rural New-Yorker.*

HOW CORN IS PRESERVED IN RUSSIA.—At a late meeting of the Academy of Sciences, held in Paris, a letter from M. de Semchoff—a Russion landholder—was read, describing the manner in which corn-pits are made in that country. The pit is dug in a dry soil, and instead of masonry, the sides are hardened by a long continued exposure to a wood fire. Before the corn is introduced, the air in the pit is ratified by burning some straw in it, after which the grain is thrown in, packed close, and the pit tightly enclosed. Corn has been preserved in such pits for forty years. Some of our western farmers, who raise large crops of wheat and corn, should try this method of preserving grain during years when there is a great yield, in order to lay up a store for seasons of an inferior yield.

WHITE BEANS.—We saw a fine sample of wnite beans the other day from the farm of Col. H. H. SYLVESTER, of Charlestown, N. H. Product, *forty* bushels to the acre! Samples of corn and oats from the same farm, were also very fine.

For the New England Farmer.

A POMOLOGICAL POEM.

BY R. H. TEWKSBURY.

Byron, 'tis said, drugged his sweet muse with gin!
And Bourbon whiskies Carlyle's laurels win!
What harm if I drink inspiration in
O'er the rare beauties of an apple-bin?

Here hues like glowing rubies mingle well,
And charm the gazer with their wizard spell;
If thoughts, poetic, steal unbidden in,
Can their expression be a *venal* sin?

'Tis said an apple, pressed by Eve's red lip,
Caused her and us the path of right to slip!
And yet, methinks, the stiff small voice within
Saith "apple-seeds are not the seeds of sin."

And, if 'twere so, they surely have made up
For half the woes drank in that bitter cup!
We, in their blessing, half our loss retrieve—
The curse a blessing's found, fair Mother Eve!

It brought us *Pippins* fit for angel's clutches—
The modest *Russetts* and the fair *Nonesuches:*
And crimson cheeks, like those of modest misses—
Fair apple-faces, tempting wood-nymph's kisses.

Some worship smoke, and through narghilehs suck it!
Some feed a drunken soul within, and duck it
With brandies, sherries, wines and Holland gins!
Mine thirsts for juices held in apple-skins!

Not that vile beverage held in cider casks,
Or bottled off (for medicine?) in flasks;
But the rich juices held in crimson rinds—
Distilled by dews and flavored by the winds;

Drank from dame Nature's goblets, fresh and fair—
Sweetened by breath of perfumed summer air—
Stirred by the rushing of the northern breeze,
And colored by the life-blood of the trees.

Perverted taste to swinish morsel stoops,
Makes food of frogs, and doats on turtle soups!
Give me for food the nutriment that lies
Between the crust of generous apple-pies!

As Sancho Panza called the saints to keep
The feet of him "who first invented sleep,"
So I would bless the matron, kind and wise,
Who, bless her soul, invented apple-pies.

When they appear—ye dainties stand from under!
A dish for kings who rule or gods who thunder;
Seek for a better with a golden purse—
You may go farther but you'll sure fare worse.

To wisdom seekers Solomon has told,
That 'tis like *apples* wrought of molten gold!
He lost all faith in man, all love for wives;
His faith in *apples* last of all survives.

So friend, (of course this lies 'twixt you and me,)
Go, first of all, and plant an apple tree!
That when thy frame decays and heart grows cold,
Old age may gather apples tinged with gold.

Lest Discord's apples block life's troubled way;
And Sodom's apples youth's neglect repay;
And *seeds* (not apple) sprout with every sin
And *fruits* (of wickedness) grow rank within.

Do thus, and when thy Christian friends may slip in,
Ask them to take the juices of a pippin—
And ease life's burden and earth's darksome cares,
In feasts of reason o'er huge bowls of pears:

For men are known, and judged too, *by their fruits!*
Not so the groveling swine or lowing brutes;
So bring us, friends! when we may chance to call,
The *early picked*, plucked *just before the fall.*

Old Orchard, Oct. 15, 1858.

REMARKS.—Capital, friend T.—"drop in often."

For the New England Farmer.

ORNITHOLOGY.

BY S. P. FOWLER.

The Passenger Pigeon (*Columba migratoria*) is, on some accounts, one of our most interesting birds. Our attention to the bird is not excited by its pleasant and charming note, for it has none; nor for its familiar and confiding habits, evinced by its rearing its young in our orchards and gardens; it being an inhabitant of our woods and but little dependent on our cultivated fruits and grains for its support; as it is in the forest, that it rears its young, and obtains its principal food. It is its gregarious habits principally that make it so interesting to an ornithologist, there being no bird like it in this wide world, in this particular. Indeed, there is nothing like this gregarious propensity, as seen in our wild pigeon, in all animated nature, if we except the vast shoals of fish that sometimes visit our bays and rivers. The bird possesses beauty and symmetry, particularly the male, in his second year, dressed in his nuptial suit, glowing in metallic lustre. His robust and compact form of body is just suited to give room for those powerful muscles to play, and move those long and sweeping wings, that require, in order to control them, a long stretching oar, in the shape of twelve sharp-pointed, long-tail feathers. These wings possess power enough to force the bird through the air, at the rate of a mile a minute, its estimated usual speed. The use it sometimes makes of its wings in beating the mast or beech nuts from trees, to obtain food, discovers to us their power and strength; none but the strongest pinions could long withstand this rough usage. When on the wing, the wild pigeon never flags or soars, but presses onward in a rapid flight, John Gilpin like, intent on accomplishing its journey in the quickest time. In fact, in point of speed, we may regard the passenger pigeon a perfect *clipper* amongst our birds.

To the eye of an ornithologist, it also presents, by its admirable steering apparatus, its great ability to perform evolutions difficult to most birds. This is seen when the bird is passing over the country, in its most rapid flight, and fancying it discovers food in the fields below, by a short curve it sweeps to the earth, and when within a few feet of it, checks its speed by short downward strokes of its wings. But should it not alight, being deceived in its expectation of food, or apprehensive of danger, it alters its downward course, and gracefully, by describing a circle, rises again into the air, and pursues its journey. Where other evolutions are performed by the pursuit of birds of prey, each individual bird composing the flock, doing the same thing at the same time, the effect produced upon the beholder is the same as upon viewing the rapid manœuvres of companies of dragoons. The nidification of the passenger pigeon has been the occasion of controversies amongst ornithologists. Wilson says they have only one young at a time, and breed three or four times in a season. Audubon says their eggs are two in number, and it is a remarkable fact, that each brood generally consists of a male and female.

Giraud, in his "Birds of Long Island," says, "I have heard frequent controversies relative to the number of eggs deposited by the wild pigeon. I can assure those who are of opinion that it lays but one egg, that the number is two, though generally but one young bird is found in the nest." This is accounted for by the inequality of the hatching, one usually precedes the other a few days, and the remaining egg, or young, as soon as it appears, is thrown from the nest by the first comer. The only nest of this bird we ever discovered in Danvers, was built upon a lofty white oak, and contained two white eggs. Its architecture was rude and of the true platform style, a few dry sticks carelessly placed together, and through this loose scaffolding, with the aid of a glass, the eggs could be seen from below. Have the readers of the *N. E. Farmer* observed the eggs or young of the wild pigeon? But it is its gregarious habits, as we have before said, that are peculiar, and have been noticed by many naturalists and travelers, but by none more closely than by Mr. Audubon, whose account of the bird is very full and remarkable.

Mr. Charles Waterton, an English ornithologist, is very severe upon portions of Audubon's account of the passenger pigeon, in what he says he saw of the assembling together of astonishing numbers of these birds in Kentucky. The exceptions made by Mr. Waterton, are to Audubon's account of the assemblage of foxes, lynxes, cougars, bears, raccoons, opossums and pole-cats, to feast upon the pigeons congregated together, of the many trees he observed, which were broken off at no great distance from the ground by the weight of these birds on their tops, of their arriving by thousands, and alighting everywhere, one above another, until solid masses as large as hogsheads were formed on the branches all around. To this, in a querulous way, Waterton says, "I now leave the assemblage of wild beasts, the solid masses of pigeons, as large as hogsheads, and the broken trunk of the tree two feet in diameter, to the consideration of those British naturalists, who have volunteered to support a foreigner, in his exertions to teach Mr. Bull ornithology in the nineteenth century. And by the way," continues Mr. Waterton, "at the end of Mr. Audubon's 'Biography of Birds,' I observe a most laudatory notice by Mr. Swainson. He tells us that Audubon contemplated nature as she really is, not as she is represented in books; he sought her in her sanctuary. Well, be it so; I do not dispute his word; still, I suspect, that during the search and contemplation, either the dame herself was in liquor, or her wooer in hallucination."

Now we believe that all Mr. Audubon says he himself saw of the wild pigeons, on the banks of the Green river in Kentucky, is true, notwithstanding what European naturalists may say to the contrary. They must not judge of the habits of our fast, gallant and truly American bird, with half a continent like ours to range in, and which possesses such powers of flight, that in twenty hours, every pigeon in the Union could meet together in one great mass meeting, with the gentle, quiet, short-winged doves of Europe. I see Kalm, in his travels, notices the breaking and falling of trees, in a partial state of decay, by the weight of pigeons on there tops. Such may have been the condition of the trees broken, and noticed by Audubon. When old and bare of leaves,

they are always favorite resting places for wild pigeons. Our bird has a very extensive range, being found from the Gulf of Mexico to Hudson's Bay, and probably further north, for I find the following notice of it in the appendix to the third voyage of Sir John Ross, page 29. "A young male passenger pigeon flew on board the Victory, during a storm, whilst crossing Baffin's Bay, in latitude 73½ degrees north, on the 31st. of July, 1829." It is a singular and interesting fact, that it had never been seen so far north before.

Danvers-Port, Oct. 1, 1858.

For the New England Farmer.

LETTER FROM VERMONT.

Crops—Apples and Cider—Winter Evenings—Annual Fairs—Horses at Premiums—The Legislature—Thanksgiving Day—Promotes Matrimony — Gratitude of Old Folks — Winter Schools.

DEAR FARMER:—Thinking that a word or two by way of remembrance, from away up in Vermont, might not be entirely unacceptable to your columns, I am seated with a view of making a "scratch," which you will be at liberty to use, only in case you should lack the usual quantum of interesting matter, with which you come so constantly laden.

Our crops, which so recently covered these hills and valleys in great variety, are now nearly all gathered in, and our barns and garners are literally groaning beneath the abundance which fills them. Among all our harvest, are we short in nothing, unless perhaps it be a partial lack of apples (and cider) in some localities. And by the way, a failure in this crop, is seriously felt, since we must have the long winter evenings, and how shall we get on with the stories and chit-chat, without the apples and cider? Too long have these been associated together to be parted lightly. O, those glorious old days, when these hearts were younger, so well remembered, before fastidious, foolish fashion and misnamed, hypocritical refinement, had usurped the places of generous hospitality and frank, honest sociability, that we so well enjoyed in those plain old homes, when the products of God's bounty were used without stint or measure.

That reliable personage, the "oldest inhabitant," is said never to have seen so abundant a crop of corn as the present season has yielded, in all parts of our State. In fact, every farmer finds himself much in the same condition that the old fellow over in New Hampshire once did, who happened to be favored with a crop of sound corn, (a very rare thing for him,) and complained to his neighbors that he had nothing to fatten his pork on, as he had no hog-corn. And we have quite eschewed the cant phrase of "small potatoes and few in the hill," for the present very much resembles the old-fashioned crops of this root. So with plenty of corn and potatoes, we Green Mountain boys (and girls, too,) can get on right well, even though the Atlantic Telegraph should not work very satisfactorily at present.

Our Annual Fairs, State, county and town, have all passed off, and I suppose they have never been more satisfactory than the present season. A grand show of all the necessaries, comforts and luxuries of life have never failed to be exhibited—always accompanied with sufficient specimens of taste, fancy, ornament and skill to satisfy all for whose good opinion we care, that though ours are humble homes, and productive, remunerative labor is our lot, nevertheless, these wives, these sisters and these daughters, (Heaven bless them all for their goodness,) are not alone fitted for drudgery, but can show true polish, and are not a whit behind any of their fair sisters in any regard.

One thing in connection with these fairs which I regret to notice, namely, the increased attention that horse-racing is receiving, as though it was of the least possible consequence which of two or more cheap horses can the soonest by a second or so go over a half-mile track. Is this the true test of a good horse? Is it of more importance that an animal can go fast, than that he is kind, gentle, tractable and easily managed, that he have bottom and capacity for and a willingness to labor? Is it of more importance that the caprice of fast young men be gratified, rather than that the real wants of the family should be consulted, with reference to horse-breeding and horse-training? Then why is so much pains taken and so much money offered to promote this objectionable feature in all our State and county gatherings?

It seems to me that in these utilitarian days, more regard should be had in offering premiums to the real and intrinsic value of things. Is there any good reason why an overwrought harness, a fancy buggy, or a fine wooled buck or ewe, should receive double or treble the sum given for the best acre of corn, wheat or potatoes, or the best plow or harrow? True merit resting on the foundation of usefulness, ought more to be regarded in awarding prizes. And why are not more frequent rewards offered for important and successful experiments in agriculture, or for instructive and valuable essays on the same? Are these of less consequence to the community than a fast horse or a showy carriage or harness? In my view, a single letter from your correspondent, Judge French, detailing the inception, progress and result of a single experiment in draining wet, or reclaiming worn-out lands, is of a thousand times more value to the wants and wealth of the country than all the reports of the "turf" that have or will be made while time lasts.

Our Legislature is now in session, and the machinery of law-making is in full operation, and will doubtless turn out results about as consequential as would be the settling of the great question of the difference between "tweedle-dee and tweedle-dum." "We are governed too much," is now as true as when first uttered. By adopting biennial or even triennial legislative sessions, the true interests of our little State would be advanced.

"Thanksgiving Day" has been appointed, and will soon occur; and O, how many hearts dilate and grow warm on the return of this time-honored occasion. Children love it, because of its sports and its bounties—young men and maidens love it, as it is so often made the culminating point of their love and hopes—and old men and matrons reverence it sacred in their recollections, as the day on which they twain gladly became one flesh and have since borne each other's burdens. Nowhere is there more real, heart-felt joy and thankfulness on the return of this blessed old

day, than around the homes and hearths of Vermont. "May its shadow never grow less."

Then comes "Monday after Thanksgiving," when our winter schools uniformly commence. These need a chapter by themselves, which I hope to have time to attend to in season. E. J.

EXTRACTS AND REPLIES.

HOW TO DESTROY CANADA THISTLES.

I own a piece of ground which was anciently used as a pasture, there being a small spot of what we call Canada thistles on it. More than forty years ago I broke up and summer-fallowed it. After raising two crops of grain, one of wheat, the other oats, it was seeded down with clover and herds grass. Since then it has been used as a mowing field, having been mowed every year since. Still, that spot of thistles not only remains, but has gradually increased. Now, as I consider this a singular case, never before having failed to exterminate a spot of thistles in three years mowing, I wish you, or some of your correspondents, to explain this mystery, and tell me how I can kill said spot of thistles. J. D.

Lebanon, N. H., 1858.

REMARKS.—Plow deep the offensive spot, manure well, and plant potatoes on it. Hoe them thoroughly, suffering not a weed or a Canada thistle to grow among them. Plant corn on the same spot for one or two succeeding years, with the same faithful culture, then sow to grass, and you will probably be able to tell the world how perfectly you succeeded in suppressing a plant which once exercised the wisdom of sage legislators in your State to devise means to destroy.

Cutting down Canada thistles and burning them on the spot will not affect the roots so that they will not spring up again. The Plow and the Hoe are the civilizers that succeed.

—

PROFITS OF DWARF PEAR CULTURE.

Allow me to state for the benefit of those who doubt the success of dwarf pear culture, that from less than ¼ of an acre planted 7 years ago, of Duchess de Angouleme dwarf trees, I have since sold over $400 worth of fruit, and that this year my best pears sold here to go to Philadelphia at $25 per barrel, and the second quality in New York at $17 per barrel. The culture is no more expensive thus far than the same ground planted to potatoes. My best barrel contained 166 pears. The trees are very vigorous and strong, and give promise of abundant productiveness in future. T. G. YEOMANS.

Walworth, N. Y., Oct., 1858.

—

BLAST IN MELON VINES.

Your subscriber, H. T. WISWALL, of Marlboro', N. H., wishes to know the cause of blast on melon vines. I have been in the habit of raising more or less vines for twenty years, and have always met with the same difficulty when I planted my vines on the same ground more than one year. My mode of raising vines is this; in the spring or fall, I break up a piece of green sward and dig holes in the ground as large as a bushel basket, and fill that up with coarse manure; cover that with a light coat of loam, and plant my seed on that, and I never have failed of a crop. I have made up my mind that it is a worm in the old manure which destroys the root and causes the blight. I have had them destroyed after the melons were as large as a two quart measure. I have raised two melons this year that weighed 46 pounds. I think if the subscriber will try green sward, he will find no difficulty in raising a crop. My time of planting is about the 20th of May. J. LEWIS.

North Springfield, Vermont.

—

SPARE THE BIRDS.

Can it be, Mr. Editor, that our friend, the eminent cultivator of West Danvers, is sincere in his argument for the destruction of the robin? I have ever looked upon him as a man of peace, and amiable propensities. I have therefore read his high-wrought rhapsody against the robins with pity and astonishment.

What, shall the robins be wantonly killed because, when no other food is at hand, he sustains life by picking berries from worthless shrubs? Did not the power that created the robin endow him with an instinct to sustain life? Who has the right to complain of his efforts to do this, notwithstanding the title deeds of the most grasping miser? If the truth were fully known, I think our friend would be found much more disturbed by the injuries done to his cultivated fruits, and the diminished income consequent thereon, than by any injury done to his neighbor's pastures. Neither he, nor any other person, has the right to proclaim, "I am monarch of all I survey," but all God's creatures have their right to as fair proportions. And I hope it will be a long time before he will again appear as the advocate of such selfish notions. Possibly our friend may think, that he can make wiser and better laws than his predecessors have done.

October 23, 1858.

—

COMPOSTS, MUCK AND ASHES.

Allow me to bring your attention to an article in your work under the head "Composts Muck and Ashes," on page 405 in your *N. E. Farmer* for September, which requires to be written over again. You quote "15 to 20 bushels of ashes (wood ashes) or 90 pounds of potash are required to a ton of peat."

In a following paragraph you say of yourself—"five bushels of ashes to a cord of muck has been found sufficient."

These two accounts of the quantity of potash differ enormously.

In the first statement, 15 or 20 bushels ashes are necessary for a ton. In the second, "5 bushels of ashes to a cord." A cord must be equal to 3 tons.

One statement 15 to 20, and by the other, less than 2 bushels for the same quantity of peat.

By the first statement, 90 pounds of potash is required for a ton of muck or peat. Now what would this cost? Evidently too much to be afforded by any farmer who could not agree to pay

5 or $6 for a material to make a ton of manure. The article states that *any alkali* will produce the desired effect upon peat. Will common salt produce as salutary an effect as potash?

I hope you will examine this question. It is of the utmost importance, and if the 90 pounds of potash can be reduced to 9 pounds, it should be known.

I think you will be doing the public and your subscribers a favor by giving accurate information on the subject of converting peat into a manure *cheaply*. S. T.

Nahant, Sept., 1858.

REMARKS.—The above article happened to get shut up in the September number referred to, and that must account for the delay in noticing it.

We have no doubt that the "ninety pounds" should read *nine* pounds, for that would certainly afford a fair amount of alkali for a ton of old muck, when dissolved and sprinkled thoroughly through it.

We do not think that common salt would produce as quick, or so desirable results as the potash, at an equal cost.

—

CULTURE OF CRANBERRIES.

I have a piece of ground which I wish to appropriate to the culture of cranberries, if suitable; now what I wish to know is, what kind of soil is most suitable, what manner to introduce them into the soil, and how to prepare it, and at what time, also the time of flowing, and how long? And in short, all the information you see fit to give, and oblige J. C. MARTIN.

Amesbury, Mass., Oct., 1858.

REMARKS.—In the Monthly *Farmer* for November, 1857, there is a carefully prepared account of cultivating cranberries, consisting of three or four pages, in which we think you will find all you want on the subject.

In the Transactions of the Massachusetts Board of Agriculture for 1855, there is also a detailed account of the culture of the cranberry.

—

JEFFREY'S PATENT BALL VALVE PUMP.

Can you, or any of your correspondents, inform me about Jeffrey's Patent Ball Valve Pump for deep wells, the cost of them, and where they can be seen, and oblige many a farmer that has a deep well. A SUBSCRIBER.

North Reading, Mass., Oct., 1858.

REMARKS.—We cannot—we have seen the pump, but do not know where pump, patentee or manufacturer can now be found.

—

A GOOD YIELD OF POTATOES.

For an experiment, I planted one potato, the 21st day of May last, in ten hills, and dug them the tenth day of October, and from that one potato I obtained one bushel and four quarts of sound potatoes. J. W. HALL.

Barton, Vt., 1858.

BASKET WILLOW.

Where can I get any information about the culture, value, &c., of the basket willow? Please inform me through the *Farmer*, and oblige a subscriber. E. A. MULLIKEN.

Lexington, Oct., 1858.

REMARKS.—In the Monthly *Farmer* for January 1854, is a capital article on the subject by CHARLES DOWNING, Esq., of Newbury, N. Y., and in the Transactions of the Norfolk County Society for 1854, there is abundant information on the subject by JOHN FLEMING, Jr., of Sherborn.

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NATIVE COWS, BEST FOR MILK.

"I have very often heard the best judges of stock say that if they desired to select a dairy of cows for milk for sale, they would go around and select cows commonly called native, rather than resort to pure bred animals of any of the established breeds, and that they believed they should find such a dairy the most profitable."

Flint's Treatise, p. 54.

I want no better testimony in favor of our New England stock than this. It entirely accords with my own observation, which has not been short or limited. ESSEX.

Oct. 20, 1858.

—

COW SHEDDING HER MILK.

Will you inform me through the *Farmer* what will prevent a cow from shedding her milk?

October 14, 1858. A SUBSCRIBER.

REMARKS.—It is said that the use of Collodion, applied to the aperture in the teat for a few days, will prevent the leakage. We have never tried it.

—

FAT STEERS.

Mr. E. Mehuran, of Middletown, Vt., has a four year old steer, weighing 2000 lbs. Mr. R. S. Wells, of Wells, Vt., has one of the same age weighing 2160 lbs.

—

WILD LANDS IN MAINE.

We have no means of giving our correspondent, "P. T.," at East Wilton, N. H., the information he desires about the "wild lands in Maine."

HOW TO LAY OUT A GARDEN.—This is the title of a work intended as a general guide in choosing, forming, or improving an estate, from a quarter of an acre to a hundred acres in extent, with reference to both design and execution. By EDWARD KEMP, Landscape Gardener, Birkenhead Park, England.

The work before us is a reprint from the second London edition, and is published by *Wiley & Halsted*, N. Y. It is written in a pleasant and attractive style, is handsomely printed and illustrated with numerous engravings, and embraces almost every conceivable design in its plans.

For sale by Crosby, Nichols & Co., Boston.

For the New England Farmer.

ANOTHER PLEA FOR THE ROBIN.

BY WILSON FLAGG.

I have lately become informed of some new facts in regard to the robin, which I think may be worthy of another communication to the *Farmer*. Before I had investigated the habits of this bird, with particular reference to the services he renders to agriculture, I supposed he was only of secondary importance, compared with the blackbird and others that possess the faculty of discovering and seizing the grubs that lie concealed beneath the surface of the ground. Though the robin does not possess this faculty, he is pre-eminently serviceable in other ways; and the more I have studied his habits the more I am convinced of his usefulness. Indeed, I am now fully persuaded that he is valuable beyond all other species of birds, and that his services are absolutely indispensable to the farmers of New England. Some persons believe that the robin is exclusively a frugiverous bird, and that for fruit he will reject all other food that is within his reach. Others believe that his diet consists about equally of fruits and angle-worms, but that he is not a general consumer of insects. The truth is, the robin is almost exclusively insectivorous, and uses fruit as we do, only as a *dessert*, and not for his subsistence, except in the winter, when his insect food cannot be obtained. He is not omniverous, like the crow, the jay and the blackbird. He rejects farinaceous food unless it is artificially prepared, derives almost his entire support from insects and grubs, and consumes, probably, a greater variety of species than any other known bird. I am entirely at a loss to account for this very prevalent and mistaken notion respecting the frugiverous habits of the robin.

Early in May my son caught and caged three young robins, and I encouraged him in the act, that I might be enabled to study their habits of feeding. He commenced by feeding them with angle-worms and soaked bread, giving them the latter very sparingly. They soon died, evidently from an excess of the farinaceous part of their diet. He then took three others from different nests, and fed them more exclusively on worms, with some fruit. Two of these also soon died, and the remaining one appeared ill and drooping. I suggested that the bird probably needed insects as well as worms, which alone were not sufficient to supply all the wants of the system, though he had access to cherries and soaked bread, of which he could eat whenever he wanted them. After this he was supplied with all sorts of grubs and insects which my son was able to capture. The robin devoured these indiscriminately and with great eagerness. He was never known to refuse one of any description; though bees and wasps were not offered him, all kinds of beetles, moths, bugs, grubs, vine worms, chrysalids and caterpillars which were presented to him he devoured.

After this improvement of his diet, the bird soon recovered his health; and the experiment proved conclusively, that this variety of insect food was necessary to the life of the bird, at least while he was young. These insects were not put into his mouth; they were placed upon the floor of his cage, and he picked them up, *killing them in a way that showed that he knew instinctively how to manage them.* I mark these words in italics because they contain an important fact. He was particular in beating the vine worm considerably before he swallowed it; but he never refused one or neglected to eat it. On one occasion, having swallowed a hard beetle, and finding it incommodious, he threw it out of his crop by a voluntary effort, beat it awhile with his bill against the floor, and then swallowed it again. This fact also proved his instinctive knowledge of the mode of proceeding in such emergencies.

It is a fact worthy of notice, that the golden robin, which has the reputation of performing more service than the common robin, may, when confined in a cage, be fed almost entirely on farinaceous food, without injury to his health. This fact is good evidence that the common robin is more entirely insectivorous than the golden robin. The contrary is generally believed.

The fondness of the robin for cherries and other fruit is not peculiar to his species; it is equally remarkable in almost all other insectivorous birds. The birds that do not eat cherries are generally of those species which are the least valuable to agriculture, such as the graminivorous birds, including most of the finches. And it is a fact which ought to be more generally known, that the most useful birds are such as are in one sense the most mischievous: they all steal either our fruit or our grain. Next to the robin, probably the most useful bird to agriculture is the red-winged blackbird, called the "maize thief," from his habit of stealing Indian corn, when it is in the milk. But the blackbirds are not sufficiently numerous or familiar in this part of the country to render us a great deal of service.

The truth is that nature does not afford us a benefit without exacting pay for it. Hence if a bird is particularly useful to our fields, he is sure to devour some portion of their produce. We must be content to pay them for their services, as we pay a hired man, for clearing our trees of borers and caterpillars. If it were possible to obtain an exact estimate of the services performed by the robin, we should be willing to pay him more than the value of what he steals, rather than dispense with his services. At present, however, it must be confessed that the robin tax falls chiefly upon those who raise cherries and other summer fruits. This is an evil which must be patiently endured for the common good. There are only two remedies of the evil to those who happen to be the unfortunate owners of cherry trees: the first is, to cut down all the trees on one's ground, on the principle of cutting off one's nose to spite his face; the second is, to induce all others to plant cherry trees, that the present possessors may have company in their misery. The extermination of the robins is out of the question, as it would be hardly advisable to sacrifice the interests of all the staple products of agriculture, to preserve a few bushels of cherries.

As an improvement of the second remedy, we should, as I have intimated in a former essay, encourage the growth of the high blueberries, on the borders of all our pastures in all parts of the country, especially in the vicinity of large towns. I observed in the early part of the season, that the cherry trees before my windows were filled with robins, whose numbers diminished as the fruit ripened and improved in quality. The ques-

tion was asked if the robins preferred the cherries before they were ripe. It was answered by remarking that as cherries became more abundant, their depredations were spread over a wider surface. This was hardly a sufficient explanation. The problem was soon solved, however, by discovering multitudes of robins in the blueberry pastures, where the berries had ripened in great abundance, and were preferred to cherries, by the robins. I am persuaded that a tree full of the finest of cherries in the middle of a blueberry pasture, would remain almost untouched.

For the New England Farmer.

FALL PLOWING.

The month of November is a favorable time for plowing grass lands that are to be planted the following spring. The weather now is cool and bracing, and favorable for the team, and there is generally leisure for doing the work. Also, the plowing being now executed, there is more time left in spring for other necessary operations.

Late fall plowing generally disposes of the cut worm, and the common grub worm, and also of their eggs, leaving, in this respect, a clean field for the next year's crop of corn or potatoes. I have found, by repeated experience, that it is unsafe for me to plant corn on green-sward plowed in spring. Either the cut worm or the grub, and sometimes both, will be pretty sure to damage the crop, in two out of three cases. But by late fall plowing they are cleared out of the land, and very few, if any, hills of corn are found missing the following season. My team is now breaking up a piece of green sward nine to ten inches deep, that has been much infested with grubs this season, so that in some places the grass is completely killed out. Quantities of the grubs are turned up to the surface in plowing, and often one may take up a handful of minute eggs, in a place, in the upturned furrows. Now this late and deep plowing quite disturbs the winter arrangements of the worms. If the land had been left unplowed, and covered with the grass sward, and, perhaps, through the winter, covered with snow, it would not have frozen very deep—perhaps not more than three to six inches deep, and that not permanently for the winter. But being plowed, the land will freeze solid, in one cold night, as deep as the furrows, certainly, and probably before mid-winter it will be frozen from one to two feet deep, remaining so till spring.

By turning the sod over in November, nothing green starts up, and the frosts of winter, immediately following, mostly kill the grass roots, so that the labor of planting and weeding the succeeding crop is less than after spring plowing. The frost also so divides and crumbles the plowed land that on harrowing in the spring the soil is easily reduced to a fine deep tilth.

In breaking up grass land in the fall, it is well to plow deep—from eight to ten or twelve inches, according to the quality of the land—so that when the manure is spread in spring, there may be enough loose earth on top, in which to bury the manure well, without disturbing the sod underneath. If the manure is unfermented, it may, by using a light plow, be covered from three to five inches deep, according to the depth of the fall plowing. This suits me better than it would to bury the manure down deep, under the sod, where it lies too inactive and powerless for the crop of corn. If the manure to be applied is fine compost, then it can be worked into the land sufficiently with a harrow or an ox cultivator.

The action of frost, snow, sun and rain, on the upturned subsoil, is highly beneficial to it, and improves the productive power of the land.

Land that has been planted with hoed crops this season, and is to be sown with grain and grass seeds next spring, may be plowed this month, provided it lies tolerably warm and dry, and is not subject to overflow, or undue wetness, during winter and early spring. By plowing it now, it will not need plowing again, but will be all ready to receive the grain and grass seeds at the first opening of spring work, and thus the seeds can be got in a week or ten days earlier than if the land were not plowed till spring. This will most likely be favorable for the crop of grain, and for a good catch of grass. If the land to be plowed is corn-stubble, it will be well to harrow it first, which will open and level down the corn hills, and the stubble will be the better turned under in plowing, and the plowed land have a smoother surface for seeding. The corn stubs, lying beneath the furrow through the winter, will not be likely to come to the surface to clog the harrow at seeding time, and thus the field being clean, the seeds can be worked in quite evenly. It has been my practice, for several years past, to plow such stubble land in the fall, and thereby considerable convenience has been found in getting the spring work along seasonably.

F. Holbrook.

Brattleboro', November 2, 1858.

SUCCESS OF THE STEAM PLOW.

During the last year, the Illinois State Board of Agriculture offered a premium of $5000 for the best *Steam Plow*, capable of doing the work well. We gather from an article in *Emery's Journal of Agriculture*, published at Chicago, that it was expected that three different inventions would be exhibited and tested at the State Fair at Centralia on the 16th of September, but only one was on the ground. That was

FAWKES' LOCOMOTIVE STEAM PLOW,

which excited great interest among the prairie farmers, and performed well. The machine and apparatus, with fuel and water, weighes only about seven tons, and by the use of a drum or barrel-shaped driver for propelling the locomotive, the difficulty of miring in soft soil, and slipping on hard, smooth ground, is overcome. The steam plow is easily managed, and is described as a cross between a locomotive and a tender, combining the essential elements of both, mounted on two guiding wheels and a huge roller. The prairie ground on which it was tried was baked as hard nearly as a brick, but the engine turned six furrows side by side in the most workmanlike manner. The excitement of the crowd was beyond

control, and their shouts and wild huzzas echoed far over the prairie.

This plow was invented and exhibited by Mr. FAWKES, who resides in Lancaster, Penn., and is the first, we believe, ever set in motion in this country. On the broad lands of the prairies, it must prove, if entirely successful, of incalculable benefit.

For the New England Farmer.

UNDERDRAINING.

In executing a system of thorough drainage, as in all other work, it is necessary to make the original cost as slight as possible, in order to realize the greatest return in proportion to the outlay. That this may be done, it is necessary for the person having charge of the work to be familiar with all its details, both the scientific and practical, and to know the most effective use of labor, that he may attain the desired object by the shortest and simplest process. Very much work, however, must be done where the services of such a person cannot be readily obtained; it then becomes necessary for the proprietor to do his work as economically as possible, with such knowledge as can be obtained from those more familiar with the work. To such, I propose to make a few suggestions on a single practical point, which may be useful to them.

The only object for which trenches are cut in underdraining is that the pipe may be placed in its proper position, and as the amount of earth thrown out materially affects the cost of the work, it is of great importance that no more earth should be disturbed than is necessary to give the workmen room for a free use of their tools. The width at which trenches can be most economically cut is much less than is generally supposed, and the dimensions that are given below, though they may seem small, are the result of some experience and may be relied on, except in peculiar circumstances. The accompanying diagram shows the lines that may be followed in forming the cross section of a trench from two and one-half to six feet deep, and to admit a pipe from one to eight inches inside bore.

The full lines represent the sides of the trench, the horizontal dotted lines are at certain distances from the bottom, as represented by the figures opposite each at the side. The figures above each represent the width of opening at the surface for a trench of that depth, the widths are given in feet and hundredths, to reduce the decimal to inches, divide by eight, the result will be inches nearly. The ertical dotted lines show what earth must be removed in order to increase the width at bottom to receive the larger sizes. Suppose a trench is to be dug four and one-half feet deep, the number opposite 4½ is 1.42 or one foot five inches, which is the width of opening at surface.

If the trench is to be three feet deep it need be opened only one foot wide at the top, and with proper tools, it can be carried down to a width of about two inches at the bottom, though, of course, the foot of a man cannot come within six or eight inches of the bottom, in which case the pipes are laid by a man walking on the surface at the edge of the trench, who lifts the pipe, piece by piece, with a kind of hook made for the purpose, and lays them carefully in the trench, as shown by this engraving.

The cross section of the land, shown in front, represents it as having had the advantage of draining, by which the water-table is brought to a level with the bottom of the drain, as shown by the heavy shading. An "Irish spade" and a pipe-layer are shown lying on the ground.

If the work is done by a common spade, the width of opening at the top may be the same and the sides can be carried down as near together as the width of spade will allow. The "Irish spade" has been used by Judge French in opening trenches on his grounds in Exeter, during the past season, and with very satisfactory results. This tool being owned by many persons in this vicinity, who may undertake such work, I suggest that it will be well to use it in preference to the common spade.

As it is not necessary to the convenience of the workmen that the sides of the trench be carried down any nearer vertical than is represented in the engraving, they may be opened and carried down in the same manner, for each size of the pipe, until the sides have approached so near, that a pipe of the size required can be just passed between them; the cut may then be carried down vertically to the depth required. This allows much earth to remain which would be thrown out if the sides were cut straight down from the width opened at the top to the width at bottom. A skilful workman will dig the trenches with ease in this way, after some practice, though it may be a little troublesome at first. I am now having trenches dug in which the opening at the surface is even less in width, for the required depth, than is here given.

The labor of one man in a day of ten hours varies very much under different circumstances.

1. In hard, gravelly and clay soils, where picking is constantly necessary, a man will throw out only from three to five cubic yards in a day.

2. In ordinary clay and gravel, with an occasional use of the pick, he will throw out about ten cubic yards in a day.

3. In loose earth, without picking, or in shov-

elling after the picking of another, as in railroad excavations, a man throws out fifteen to eighteen cubic yards a day.

In the first case, a yard, or twenty-seven cubic feet, will be removed for twenty-five cents, by a man who works a day, of ten hours, for one dollar.

In the second case the removal of a yard will cost ten cents. This will be the basis of our estimate of the cost of cutting trenches, from the fact that most soils which need draining may be classed under this head.

In the third case, one yard will be removed for about six and one-fourth cents. The solid contents of earth removed from a trench one hundred feet long, of sufficient width at bottom to admit the smallest sized pipe, and of the depth as shown, is as follows—

Depth.	*Cubic Feet.*	*Cubic Yards.*	*Cost.*
2½ feet	127.5	4.72	$0,47.
3 "	174.	6.46	0,65.
3½ "	227.5	8 43	0,84.
4 "	288.	10.67	1.07.
4½ "	355.5	13.17	1,32.
5 "	430.	15.93	1,59.
5½ "	511.5	18.94	1,90.
6 "	600.	22.22	2,22.

To this must be added the cost of tools, trimming, and superintendence.

The quantity removed by increasing the width at the bottom of the trench so that it may admit pipes of the larger sizes, is very slight, being only one and one-fifth cubic feet in one hundred feet length, on increasing the width to three inches at the bottom. Quantity removed by increasing the width to four inches is four and four-fifths cubic feet; to five inches ten and four-fifths feet; to six inches, twenty and two-fifths feet; to eight inches, forty-five feet; and to ten inches seventy-nine and one-fifth feet.

The increased cost being for the three inch width one-half cent; for four inch, two cents; for five inch, four cents; for six inch, eight cents; for eight inch, seventeen cents; and for ten inch, twenty-nine cents.

The amount of earth removed by widening the trench for a larger pipe is the same in every case, without regard to the depth. Take an example: a trench is to be dug four feet deep for a one inch pipe, the cost of which will be $1,07 for one hundred feet, and a trench of the same depth for an eight inch pipe will cost $1,36. If the trench is to be six feet deep for a small pipe, the cost will be $2,22, and for the large pipe, $2,51; the increased cost in each case being 29 cents. A pipe with an eight inch bore requires a trench ten inches wide at bottom.

Judge French, of Exeter, whose work is done in a systematic and very skilful manner, had a trench two hundred and thirty feet long, four feet deep, with a width at top of twenty inches and at the bottom of four inches, cut in one day, by two men, at a cost of two dollars; by the basis used in our estimates, it would cost three dollars and forty-one cents, but the digging was quite easy on his land, the soil coming under the third case cited above, and would by that basis cost two dollars and thirteen cents, the estimate being thirteen cents more than the actual cost on the entire length, or less than one cent a rod.

These estimates call for no more work than any man with ordinary skill in handling the spade should do, though few trenches, probably, are so economically cut, except under the direction of a competent superintendent, who is familiar with the work. J. HERBERT SHEDD.

Boston, Nov., 1858.

For the New England Farmer.

ABOUT MANURES.

MR. EDITOR:—I am a reader of your valuable paper, and find very many things worth practising. But I find that some things do not turn out as I expected. I built a barn some three years since, forty by forty-eight feet, with cellar under the whole, but did not get the dirt all out the first year or two, so I carted out what manure I made in the summer, (as I put up my cattle every night to make more manure,) and have found that this manure caused the corn to start much quicker than that which I take out in the spring, when hogs have been on it all winter, and it had been overhauled two or three times besides. It shows the difference even in the second year. Why is this? Does the action of the frost help to make the manure better? I carted out the manure at first for lack of room, and felt very sorry that I was obliged thus to do. But it proved a good operation.

Now that I do not need the room, shall I continue to cast out the manure, is a question with me, not being willing to believe, hardly, what I know to be true. It seems as though it were self-evident that manure kept out of the storms, wind and sun, six months longer, must be better—but crops show otherwise.

My hogs are of the Suffolk breed, too lazy to work, and do not root up the manure much, but run over it till it is as hard as it well can be. I don't know but that is the reason that it is not so good as that out in the free sunshine.

ALVAN WARD.

Ashburnham, Mass., 1858.

REMARKS.—There are so many varying circumstances attending the use of manures, that it is often somewhat difficult to fix upon any one special reason how a certain effect is caused. We believe a great loss is sustained by the farmer in consequence of using his manures in a too crude or unripe state; they are applied to the soil directly from the barn cellar, or from the heaps under the windows, mingled with coarse herbage, and in many cases imperfectly covered or mingled with the soil. But when well covered, the wet masses adhere to each other so that the manure cannot be minutely mingled with the soil, ready to be moistened by rains, and rendered solvent by chemical action, and prepared for the use of the plant.

In the case before us, the difference between the action of the manures hauled out in the autumn and that hauled out in the spring may be imputed to the greater mellowness and fineness of the former, making it more suitable to furnish food at once for the springing plant. The act of shovelling it into the cart, tipping it up, and

throwing it into a compact heap mingles and pulverizes it, and greatly assists in preparing it for use.

Manure carried out in this way, after the weather becomes so cool as to freeze the surface of the heap, will not shrink so much by evaporation as to amount to any considerable loss, while the inside of the heap is probably undergoing a gentle fermentation, which is highly useful to it.

For the New England Farmer.

BEE HIVES—REPLY TO "J. B. C."

MR. EDITOR:—Controversy of any kind I very much dislike; it seldom amounts to much, and usually the great point at issue is lost sight of and the contest ends more in personal ill will than the advancement of truth, or the correction of error. But for the style in which "J. B. C." disposes of an article of mine published in the *New England Farmer*, some time ago, my "self-esteem" would not allow me to notice his article of October 2. During the past two years, I have written quite a number of articles for the *New England Farmer*, on bee culture, that is, as Norfolk understands and practices it. I might as well say, to begin with, that my "self-esteem" is large on this subject, and "common prudence" has not as yet, "J. B. C.'s" article notwithstanding, kept me from urging farmers and mechanics, indeed all, both men and women, boys and girls, all who have a rod of spare land, and strength enough to handle a Union Bee-hive, saying nothing about the unweildly hive called the Moveable Comb Bee-hive, to engage in this interesting branch of farm economy. I believe it not only profitable in the long run, but aside from the profits, especially interesting as a branch of natural history every way calculated to instruct the mind and elevate the soul from "nature up to nature's God," and to teach man wisdom, industry and forethought. Norfolk's self-esteem is so large that he believes he understands this subject as well as some who have published books relating to the "Hive and Honey bee," or who have made the U. S. Patent laws on bee hives a subject of investigation, and if "J. B. C." has been a careful reader of his articles, and has exercised "common prudence," he has found that Norfolk gives only his own views, and his "self-esteem" leads him to believe that what he has written will bear examination, and has *truth* for its foundation. If "Wyoming" will visit King Oak Hill, Norfolk stands ready to prove the truth of all he may have said on bee-culture, or hives.

It seems from "J. B. C.'s" article, that he is interested in the Langstroth hive. I infer this, at least, from his manner of writing, and his intimate knowledge of the history of the patent, and the contest between Clarke and Langstroth regarding the same. I confess that I know nothing about either in this respect. I gave my opinion of the two, based on my own experience, and that of others, and it seems to me that the "self-esteem" of "J. B. C." carried him away in writing his laudatory article in favor of Mr. Langstroth and his hive, which a little more "common prudence" would have prevented him from doing. Norfolk, in his own personal experience, does not believe "that the hive recommended by the most scientific apiarian on this side of the Atlantic" is the best, nor does he admit the assertion of "J. B. C." to this effect to be true. "Self-esteem" and experience prevent this, and reading with practical use disprove it. I have stated that I am in no way interested in any "patent" hive whatever. I am not—on the contrary, I have but little faith in any hive with "patent" attached to it; it smells of humbug, and in the article to which "J. B. C." has taken umbrage, I gave my preference to Clarke's hive, and I stated that, "if as is stated, Mr. Langstroth," &c. This was, and is now my opinion, which I stand ready to prove. I will say that my authority for this language is Mr. C——, who, I am free to say, is interested in the Union Bee-hive, but not to a greater extent than is "J. B. C." for the Langstroth, as I understand his language in his article of October 2. If "J. B. C." had read the work of Huber, "common prudence," one would have thought, should have prevented him from saying the tri-angular comb guide was invented in England, or described by him, as used by Clarke in his Union hive. Huber describes quite a different affair. "It is not my purpose in this article to analyze the Langstroth hive, or exhibit wherein it is inferior to the Union, or to point out" the many good points which the Union hive combines in practical bee-culture. Suffice it to say, it has received the "encomiums of Norfolk," and he ought, and thinks he has, put it to the test, and is "qualified" to recommend it to the readers of the *New England Farmer*. I express this opinion with the more confidence, as I have now in my apiary five different patents and seven different kinds of bee-hives. I am "familiar" with most of the patent bee-hives used in this section of country, and while I thus express myself, I believe Mr. Quinby describes as good a hive as any one need have for all practical purposes, and I confess it was with much surprise I learned from "J. B. C." that he has abandoned his own superior hives, and which he so strongly recommends in his excellent work on bees. Most of his instructions are to the point, and every chapter bears the marks of practical experience. My doubts were so strong as to the statement of "J. B. C." being a fact, that some two weeks or more since I wrote to Mr. Quinby to ascertain his position in this matter; as yet I have received no reply to my inquiry, therefore I will admit the statement of "J. B. C". as true. Granting then that Mr. Quinby is so much in love with the Langstroth hive as to use it in preference to his own, or any other, this only proves what every one's experience teaches, that the "parson often preaches what he does not practice." His instructions are not for himself, but for others. I can only say to the readers of the *New England Farmer* that such advice as I have from time to time given them on "hives and bee-culture," has been put to a practical test, and in accordance with that test. So I would advise, nothing more—nothing less; and when a thing is a failure with me, or in my hands, I so enter it on the record, and instruct accordingly.

Item.—In this town and vicinity bees have done poorly this season. They swarmed well, as a general thing, but have made little or no surplus honey. Rev. Mr. Rockwood, of North Weymouth, I am told, out of nine stocks in the spring

has had but one, at most two swarms, come off. He uses the Langstroth hive. I infer, therefore, that a wet, cold season is a poor one for honey.

King Oak Hill, Oct., 1858. NORFOLK.

REMARKS.—We have only to say in regard to this matter, that we hate quarrels most cordially, and advise all our correspondents not to be too sensitive when their positions are attacked, and that we believe there is not a purer, more noble-minded man in New England than Mr. Langstroth, and no other man who has given the subject of Bee-culture so much thought and investigation, and brought to bear upon it so much varied and sound learning.

For the New England Farmer.

U. S. AGRICULTURAL SOCIETY.

Letter from our own Correspondent.]

Richmond, Va., Oct. 29th.

GENTS.:—Prompted by curiosity and love of agriculture, and being desirous of seeing this part of our beloved country, noting its agricultural resources, examining its products, both vegetable and animal, and observing its people, and more especially its farmers, I made the celebration of the sixth anniversary of the National Agricultural Society in this place, an occasion for coming hither. In doing so, I feel amply repaid for the time and the money, I will not say spent, but invested; for the money or time which one employs, in the legitimate pursuit of useful knowledge, becomes, as it were, stock, whose dividends are in proportion to the skill of the inventor and the investment. Some are only satisfied as they see their bank stocks or other similar investments multiplying, being careful to invest little in books, papers, or other means for storing the mind with useful knowledge, which, if rightly employed, gives power over both matter and mind. There are others who look upon money as a means to aid in the acquisition and diffusion of knowledge—a nobler purpose than hoarding.

Having enjoyed rare opportunities for observation concerning what relates to agriculture, horticulture, stock breeding, implement making, &c., in this southern region, I propose to furnish your numerous and intelligent readers some account of what I have seen, occasionally interspersed with my own reflections thereon.

Nearly all who visit the South, come to the conclusion that its natural resources for wealth, like those of the West, are in the soil, consequently the business of the people is the tillage of the soil, for the purpose of producing wheat, maize, tobacco, cotton and the sugar cane, together with stock breeding, as a lucrative branch of farming. The breeding of horses and mules is a productive source of income by those who understand it. So of cattle, sheep and swine—for wool-growing is becoming quite a profitable business in the "Old Dominion," as I was informed by experienced farmers.

But the first thing to be attended to and what more immediately concerns your readers, is, to hear some account of the National Fair by one who was there. In doing this I shall endeavor to give an impartial narrative thereof.

The fair was held on the grounds near the city, and well adapted for the purpose. There having been little rain here for four months, it is dry and very dusty. Crops here have suffered from the drought very much, and therefore the display of vegetables is not as good as it otherwise would have been. As for fruits, there are none scarcely—they having been destroyed by late frosts. The South will almost entirely depend on the North for apples, which will serve to keep the prices up, though the crop be a fair average at the North.

The show of stock was not large, as to numbers, but good, aye, superior in some classes, as to quality. This will apply with peculiar distinctness to the Shorthorns, Devons and Jerseys. The Ayrshires, Herefords and natives were not very well represented. There were some very superior grades of the Shorthorn breed, which had been bred back until they were 15-16 Durham. Of these were steers and oxen of extraordinary size, symmetry and beauty, thus seeming to confirm the notion, that no other cattle mature so soon as the Shorthorns and their grades.

The Devon herd, exhibited by a Maryland farmer, was very fine. The enterprising husbandman, Capt. Strandling, like S. C. Ludington, of Western Virginia, the exhibitor of Durhams, had occasion to feel proud of the skill in cattle-breeding, which his Devons demonstrated. Capt. S. had one cow, "Matilda," which was the best cow of that race I have ever seen, and though she did not receive the first premium, to which she was so richly entitled, she was crowned with a wreath of flowers, by the ladies, on leaving the grounds, as indicative of their estimation of her excellence.

The Jerseys were the next best lot. They did not meet the approval of the farmers generally. A Kentucky farmer called them "scrubs" in appearance. It is true they would thus impress a western breeder of Durhams.

Ayrshires and Herefords not well represented, and those on the ground were not such as to impress those unacquainted with these varieties, very favorably.

Natives but few and not superior.

Sheep, swine, poultry and horses all very well represented, except the swine. VIATOR.

A FARMER'S LIBRARY.

Dr. Johnson being once asked whom he deemed the most miserable, replied, "The man who cannot entertain himself with a book on a rainy day." Were the question put, What farmers are likely to make the most rapid progress and improvement in husbandry? the answer would be, other things being equal, those who read most on the subject of their vocation. A man who reads little, no matter what his vocation is, will be likely to think little, and act chiefly with reference to tradition received from former generations, or else in imitation of what is going on about him. There is always hope of a man who loves reading, study and reflection. Not all who buy books liberally and patronize the press generously, are readers. There is a class of fancy book buyers who purchase freely and expensively, but who

read little and profit nothing from the stores of knowledge treasured up in their libraries. Fine collections of books nicely arranged on shelves may beget desires of covetousness, but can impart little or nothing, only as they are read, studied, and referred to.

Every farmer, whether rich or poor, learned or unlearned, should have a collection of books on agriculture, horticulture, and the several subjects more or less intimately connected with the objects of his special pursuit. A few good books costing but little, should make the beginning of the farmer's library.

For the New England Farmer.

WILLIS'S PATENT STUMP PULLER.

We have a great deal of hard work to be done in this country, and comparatively few hands to do it. He is a public benefactor, who invents a new mode by which science may be substituted for human muscles, in the fulfilment of man's mission to make the earth fruitful and beautiful.

We fight a hard battle with hands and small tools, alone, against the great forest trees. We easily enough cut away the top for timber and fuel, but the ugly stump remains, and we are too fast a people to sit down quietly and wait the process of "a mild decay" to destroy it, and too economical to dig it out by hand, and too neat in our notions of good husbandry to think of tilling among such obstacles.

Willis's machine solves our difficulties. It pulls out the stumps by main force, asking no favors, if you will only find a place where to fasten a chain to a root strong enough to hold. The exhibition by the inventor, at Exeter, last Friday, was witnessed with universal satisfaction by a large number of persons. Some twenty-five large stumps were extracted in a few hours, some of them yellow pines, recently cut, and some white pines, whose wide spreading roots brought up with them tons of clay from their beds. The power of the machine seems almost without limit, by shortening the short arm of the lever. A single yoke of oxen, in five minutes' time, easily uprooted the largest trees upon our lot. Four men, in one instance, with no help of cattle or other power, turned out a stump which four yoke of oxen could not, without machinery, have started from its bed.

One solitary pine, which stood alone, was left for a last victim. Its wide-spreading top towered at least sixty feet in the air, and its trunk was about two and a half feet in diameter. A chain was attached to it about twenty feet from the ground. The oxen were put moderately to their work. With a steady, irresistible power, the tall tree was drawn from its erect position. The ground for a space of twenty or thirty feet about it began to rise and heave as with an earthquake. The remorseless giant tightened his grasp, till slowly upturning its huge roots to view, down sank "the evergreen pine" to rise no more.

It is fearful, almost, to witness the exercise of such power, but pleasing to see it subjected so perfectly to man's power for good.

The day following the exhibition was rainy, but the next day, which was the Sabbath, saw, perhaps, as many spectators on the field of operations, as would have filled a church, wondering at the sudden upturning of those old fogy stumps, in this radical manner.

Our farm has somehow grown very attractive within these few days. The ladies, even, or perhaps the fairies, have left in the moist, soft soil, their delicate footprints, and we know, at least, of one fair daughter of an eminent farmer of the Green Mountain State, whose bright eyes beamed brighter in admiration of the work of this new civilizer.

And so we wish Mr. Willis all success with his invention. In moving stones or buildings, in propelling a ditching machine, which somebody must invent very soon, for underdraining, in any work where immense power at low speed is required, this is, of all others, the machine.

In another column will be found the advertisement of Mr. Willis, which will give all needed information on the subject.

Exeter, N. H., Nov. 1. H. F. FRENCH.

For the New England Farmer.

MANUFACTURE OF BREAD.

If there is any foundation in truth and nature for the standard phrase, "Bread the staff of life," surely a little discussion, will be profitable now and then, on customs which seem to have in most instances become nearly or quite stereotyped. Hence I was glad to see, in a late number of the *Farmer*, a receipt or two for manufacturing "brown bread." On a subject of so much importance I love to see the smallest symptom of progress.

It is indeed true that I am opposed to all kinds of receipts for bread-making which involve the *necessity of fermentation* or raising; still, if this stupid custom must be continued, I wish to have the work accomplished in the best, that is, the least objectionable manner.

But what is the reason, Mr. Editor, that a community like our own can see no beauty in simplicity? Why is it that almost everybody revolts at the idea of making bread for the table by merely putting together the meal and water and baking it? Why is it that William Hunt's little book, entitled "Good Bread—How to make it light without yeast or powder," is so little admired? Why, sir, if I don't mistake, this little book, which only costs ten cents and a postage stamp of one cent, and which in any sensible housekeeper's hands is richly worth ten dollars, though it has been published several months, has scarcely sold, as yet, to the extent of ten thousand copies. One hundred thousand of it, to say the

least, ought to have been circulated long before this time.

It is not a little remarkable that while Mr. Hunt, a plain and almost unlearned man, has been slowly working out the problem, How to have good bread without fermentation, science, unknown to him, has been accomplishing the same thing the other side of the water. For we learn from the *Illustrated Inventor*, that Dr. Danglish, of Great Malvern, in England, has patented an improvement on the preparation of dough, from which is manufactured an absolutely pure bread, which, without fermentation, is so sweet and tender as to surprise everybody who has tasted it. The advantages which Dr. Danglish claims, in its behalf, are the following:

"1. There is a saving of the whole of the waste caused by fermentation, which averages fully ten per cent. Thus ten per cent. more bread is made out of a sack of flour, than by the old process.

"2. The process, instead of occupying eight to ten hours (in raising, moulding, baking, &c.,) is completed in half an hour.

"3. The cost of machinery and gas is less than that of the yeast used in the old process.

"4. The dough requires scarcely any handling to form it into loaves.

"5. The bread is absolutely pure. It is simply flour, water and salt.

"6. Finally, should the whole of the bread in the kingdom be thus made, a saving would be effected of an amount equal to our (the British) entire importation of foreign wheat."

We do hope, most sincerely, that this subject will attract public attention both here and in England; especially, as it can be no longer pleaded that it has been agitated by none but the unscientific and unskilful. If there be a discovery based on the principles of sound science, both chemical and physiological, it is this, which teaches us how to make good, light, sweet and perfect bread of simple meal and water.

Auburndale, Sept. 4, 1858. W. A. Alcott.

LIME ON ORCHARDS.

The value of lime for many purposes in agriculture, is no longer a theoretical question, but an admitted *fact*. On orchards, its effects have been very surprising—and such, indeed, as to surprise even the most incredulous. For many uses, lime in the stone is preferable, if it is of a character that admits of its being reduced to a condition sufficiently fine for its application, for it then contains about fifty per cent. of carbon, a principle which enters largely into vegetables. Calcination, or burning, drives off the carbon, and renders caustic lime mild. In its freshly-slaked state, its application is, in most cases, attended with disadvantage, as its causticity proves harmful in many ways. In regard to the application of lime on orchards it may be remarked that the fall is perhaps as favorable a season, on many accounts, as can be selected. Its effects are slow and lasting, and when spread on orchard grounds in August, or even in September or October, it will be felt the following year; whereas if applied in the spring, no advantage would accrue till the subsequent year, which would be a dead loss to the owner of one year's use of the pecuniary capital involved in the outlay of the experiment. In some cases, the favorable effects of lime have been clearly apparent for twenty years.

Old lime from the walls of buildings, is an excellent stimulant for fruit trees of all kinds; it acts immediately, and it acts long. In one case, a farmer who was engaged in repairing his dwelling, ordered a portion of the old plastering taken from the wall of one of his rooms, to be thrown from a window, where it was accidentally brought in contact with a plum tree which had always been unproductive, and a mere "cumberer of the ground." The subsequent year, however, it was filled with fruit. This change was owing to the lime, doubtless, as similar results have followed its application in various, indeed, in innumerable cases of a like character. We advise every person, therefore, who is the owner of an old and decayed orchard, to lose no time in giving each tree a dressing of lime, or, better still, if he can procure it, of old plaster. A peck to a tree of middling size, and half a bushel to a large one, is sufficient, according to the experience of many; but though we would by all means recommend the application of even these small quantities when larger quantities cannot be procured, yet we should sooner advise a bushel and a half. We have no more faith in starving a tree or a hill of Indian corn, than we have in starving an ox or a horse. The "penny wise and pound foolish" policy, adopted by so many, is a bad one for the farmer. It always results in loss.

AMERICAN PLOWS.

But a few persons are probably aware of the demand upon New England skill and industry for articles resulting from mechanical labor, and made of wood and iron; they are generally much better informed upon the subject of cotton and woollen goods, because they are manufactured by the aggregation of more capital, and have, perhaps, been considered more of a leading interest among our people. But we do not excel more in the latter than in the former, and the demand for each is much nearer alike, than most persons suppose.

The amount of furniture, such as chairs, bedsteads, sofas, bureaus, desks, tables, book-cases—of boots and shoes, hollow ware of wood and iron, &c. &c., is enormous, that is annually sent out from New England.

The demand for *agricultural implements* is now beyond all precedent, and the wide world seems to have its arms open to receive them, and with purse extended to pay the bills. And the demand is not the most active in the oldest settlements, but in new regions, Oregon, California, Vancouver's Island, Africa, Chili, the regions of the Amazon, and even the islands of the Pacific Ocean.

We learn that a few days since the manufacturing house of Nourse, Mason & Co., of this city, accepted an order to furnish a large amount of plows of various patterns, which order has

been filled in an incredibly short space of time, and they are now on their way to Africa, and perhaps to turn up the fertile soil which has so long been supposed to be an inhospitable desert.

Mr. Livingstone, the intrepid African explorer, will find a greater *civilizing power* in these plows, than he could in as many batteries and soldiers as sat themselves down in front of the Malakoff Tower!

In addition to this monstrous exodus of plows for the East, we also learn that within a twelvemonth, *two thousand plows*, with steel plate mould-boards, have been sent to one customer of this house, for a single port, with a prospect of still heavier orders in the future.

What worlds of grass and grain and good things will spring up in the track of these pioneers of civilization! What abodes of comfort and plenty, and refinement and moral power, and what influences will flow from them to bring nations into harmony, to make glad all people, and to cover unbounded lands with freshness and beauty.

"God Speed the Plow."

SULPHUR FOR STOCK.

The benefit derived by stock from the use of sulphur is not sufficiently well known.

Most farmers are well aware that there are certain seasons in the year when animals of every description on the farm—from the finest colt down to the poorest calf—become afflicted with (in plain English) *lice* (one of the ten plagues of Egypt,) or "*ticks*."

To become free from any trouble or injuries from the attacks of these pests, we have only to put sulphur in the feed or salt of stock so infested; or mix a little in lard, and rub it on the small and young animals. A speedy cure may be depended upon.

I think a teaspoonful two or three times a week—four or five times a year—will generally keep hogs and sheep entirely clear of such vermin.

The above article is more particularly applicable to sheep and hogs. It has been said, and, I believe, with some show of truth, that sulphur has another effect on sheep; that, given plentifully at the beginning of warm weather, as above directed every other week, till shearing time, it opens the pores of the skin, curing cough, and whitening the wool; and, as evidence of which, look at the big, snow-white sheep on the mountains of Virginia, in the vicinity of the sulphur springs.—*Ohio Valley Farmer.*

Feeding on Earth.—The earthworm not only inhabits the earth, but also feeds upon the element in which it exists: and although some naturalists have declared that it derives its nutriment from the roots of plants, yet this statement, according to the most reliable authority, is now pronounced to be a pure fable. The soil is, as you will probably be aware, impregnated with decaying organic substances of various kinds, and in order to secure these for its sustenance, the worm gorges itself with earth; the nutritive constituents are extracted in its stomach by the digestive process, and the indigestible portion ejected in little worm-shaped masses, well known to gardeners and others as "worm castings."—*The Earthworm and the Housefly. By James Samuelson.*

THE CLOSE OF THE YEAR.

"Stern Winter throws his icy chains,
Encircling nature round;
How bleak, how comfortless the plains,
Late with gay verdure crowned!"

The Year that is now about closing upon us, has not been marked by any general fatality to the herds or crops of the farmer, nor has any sweeping scourge decimated his household and brought universal sorrow upon the land; but warm suns, fruitful showers, and healthful breezes, have invigorated himself and brought to perfection the crops which he had committed to the earth in confidence and hope. These crops have been abundant, and the season has favored the Harvest, so that his garners are full, and the means of comfort and comparative independence are secured through the more rigorous months of the year.

The Year has been one of progress in nearly all the departments of the farm. There is a better appreciation, in the first place, of the advantages to be derived from the application of scientific principles to our labor, and a better disposition on the part of the farmer to avail himself of such helps. The stony walls of his prejudices have been modified, or broken down, by the introduction of new machines or new modes of culture, once considered as useless innovations, but upon trial, found to be important and profitable changes.

Another gain is in the opinion which has taken strong hold of our people, that we have heretofore *cultivated too much*, and have *not done it well enough*—that there is great loss in working over two acres to get sixty bushels of corn, when we might have got it from one.

More attention has also been paid to our cattle, in obtaining breeds adapted to our climate, and means of feeding them, and to the manner of managing them as regards health and comfort, so as to obtain the largest possible product from a given cost.

New devices in plows, mowing and reaping machines, hoes, seed-sowers and draining tools, promise to mitigate human toil, while they will increase the profits of the farm.

Another improvement, which promises happier results than any, or all of these combined, is the belief which is rapidly gaining ground, that it is as advantageous, and as important, that a farmer

be educated for the business which he is to follow, as for the merchant, lawyer or physician. That unless he understands something of the laws of chemical action, of the physiology of animals and plants, of the effects of heat and cold, and moisture in his soils, and of the cost and comparative value of his various crops, he cannot reap those benefits from his efforts, that he might if his labors were directed by a greater degree of intelligence and skill. The domestic labors of the farm, those of the house, are almost materially relieved by various devices, thus giving both sexes more frequent opportunities for leisure, recreation and study, than before, and consequently of adding essentially to the sum of human happiness.

It has been a year of general prosperity to most of us in an avocation surrounded with more charms, we believe, than most others possess—we hope it has in that higher advancement, without which our worldly effects are of little account. For if our labors and aspirations are rightly directed,

> "We cannot toil in vain;
> Cold, heat, and moist and dry
> Shall foster and mature the grain
> For garners in the sky."

Let our hearts rise to Heaven with profound gratitude and thanksgiving, for the blessing that we enjoy in the occupation of the soil, for abundant harvests, for association and opportunities of improvement, and for that general advancement in education and the arts of peace which tend to elevate and adorn our race.

And now, while the last sands of the Year are ebbing, we can only pause to say to the tiller of the soil that our earnest sympathies are with him and his household in all the departments of his labor; that his interests are our care, and that the sympathy and good fellowship which has existed through so many years between reader and writer, shall be sustained on our part by a sincere devotion to the cause in which we are mutually engaged.

PROSPECTS.

We have very little to say in regard to the *future*, in relation to the *Farmer* Its present prospects are fair and encouraging, and it is steadily finding its way into new homes and around new fire-sides, where it has never penetrated before. The efforts of Publisher and Editors will constantly be devoted to the same end, viz., to make both the Weekly and Monthly paper, *the medium of useful knowledge*, so that the reader shall be actually benefited by its perusal, to a degree altogether disproportionate to its cost. We are enabled to print a cheap paper by distributing large numbers, and the larger that number is, the more valuable may the paper be made.

We propose no material change for the future; but to improve, if we can, both in matter and style; shall introduce some new illustrations of houses, barns, fruits, flowers, machines, implements, and stock, and record whatever may come to our knowledge that is new, if it promises to be useful to the reader.

We believe in progress; that the world is not yet half as wise as it may be, and as by wisely directed efforts, *it certainty will be.* It becomes all to watch, and wait, and hold fast to that which is good, until something is found that is better, and then to hold on to the better.

We shall try, on our part, to amble along with the reader at an easy gait, by growing fields and plashing waters, or wherever fruits or flowers or forests and cooling shades attract and instruct; or if the paths of science allure, we shall not fear to travel in their light, and shall find pleasure and profit, both to the reader and ourselves, in ambling along where they may lead.

In the future we look to make many new acquaintances among our readers, as we have done the past year, and in mingling with them have found new sources of enjoyment, and new means of adding to the value of the *Farmer.* Our interest in the cause of agriculture can scarcely be increased. That love for the farm, and for rural life which sprang up in our bosom in boyhood, has never been dimmed by circumstances or time,—and the glorious manifestations of Deity which ever surround the farmer in so many varied and beautiful forms, still allure us with mild and steady light, to spend as much of life as possible on the farm.

The liberality, as well as the interest of the Publisher, will prompt him to spare no pains to give the *Farmer* all that practical value which the cultivator of the soil needs,—while the ample means which he has secured by a life of energy and industry, will enable him to secure all the advantages for his publication that any can command.

So we part with the Old Year without any regrets that it is gone, and enter upon the New Year, with cheerful hopes of being useful to the world yet a little longer.

A NEW AXLE-GREASE.—We are most kindly disposed to our friends, Messrs. Hucks & Lambert, who have made the best axle-grease in the world; but we only wish to hint that *castor-oil* is one of the best articles for wheel grease in its pure state; it will last long and operate most remarkably. Let it be tried, and then raise the castor oil bean and make our own axle-grease.—*Cal. Farmer.*